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ENVIRONMENTAL ASSESSMENT BOARD

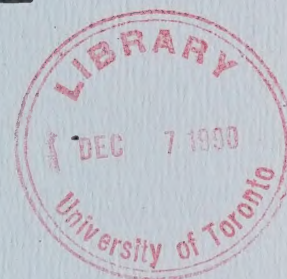
VOLUME: 265

DATE: Monday, November 26, 1990

BEFORE:

A. KOVEN Chairman

E. MARTEL Member



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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council
(O.C. 2449/87) authorizing the
Environmental Assessment Board to
administer a funding program, in
connection with the environmental
assessment hearing with respect to the
Timber Management Class
Environmental Assessment, and to
distribute funds to qualified
participants.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Monday, November 26th, 1990,
commencing at 10:30 a.m.

VOLUME 265

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member

A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
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MR. B. CAMPBELL)	
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MR. P.R. CASSIDY)	ASSOCIATION
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TOURISM ASSOCIATION

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>GEORGE MAREK</u> , Resumed	47925
Further Cross-Examination by Ms. Cronk	47925
Continued Cross-Examination by Mr. Freidin	47955

1 ---Upon commencing at 10:30 a.m.

2 MADAM CHAIR: Good morning. Please be
3 seated.

4 Good morning, Mr. Marek.

5 Good morning, Ms. Cronk.

6 MS. CRONK: Good morning, Madam Chair.

7 MADAM CHAIR: Ms. Swenarchuk?

8 MS. SWENARCHUK: Mr. Marek brought down
9 the Domtar report over the weekend and I have one copy
10 for the Board. Is that sufficient for now?

11 MADAM CHAIR: That's fine.

12 I have an appointment at lunch and we'll
13 have to break from twelve to two, and I don't like to
14 do that because Mr. Marek wants to finish today
15 hopefully.

16 If we are anywhere near finishing, the
17 Board will sit later today to accommodate that. If it
18 looks like we're going to well into tomorrow -- in any
19 event, we'll talk about it at the end of the day.

20 MS. SWENARCHUK: It appears very unlikely
21 that both Mr. Freidin's cross and my re-direct will be
22 finished today in any event.

23 MADAM CHAIR: All right. Well, let's see
24 where we are later this afternoon, and if you want the
25 Board to sit longer, we could.

1 MS. SWENARCHUK: Thank you.

2 THE WITNESS: Madam Chair, I have a
3 question here. I have already confirmed flight
4 tomorrow noon, so I have to postpone it I suppose.

5 MS. SWENARCHUK: Let's discuss it at the
6 end of the day. It's possible that you won't have to.

7 MADAM CHAIR: You would have to leave by
8 eleven o'clock tomorrow, Mr. Marek?

9 THE WITNESS: Well, I don't have to, but
10 I have to postpone the flight, if not.

11 MADAM CHAIR: Let's see where we are
12 before four and we will have time to make other
13 arrangements if we have to.

14 THE WITNESS: And I follow through
15 arrangement.

16 MADAM CHAIR: Thank you.

17 Ms. Cronk?

18 MS. CRONK: Thank you, Madam Chair.

19 MADAM CHAIR: Oh, we'll enter this report
20 as an exhibit.

21 MS. CRONK: Before you do that, Madam
22 Chair, just as a point of clarification, Ms. Swenarchuk
23 and Mr. Marek were good enough to provide me, as
24 requested, with a copy of the report on Saturday,
25 however, it appears to be missing the introduction

1 page, and I've had extra copies of the entire report
2 made with the introduction page, and perhaps what we
3 could do is, I could provide those copies to the Board,
4 have Mr. Marek confirm that the introduction page is
5 part of the report, and then you'd have a full version
6 of it to mark.

7 Is that satisfactory?

8 MADAM CHAIR: All right. Have you seen
9 that, Ms. Swenarchuk

10 MS. SWENARCHUK: I'm sorry, if that's the
11 case, Ms. Cronk, mine includes an introduction page.

12 MS. CRONK: Well then, perhaps it was
13 just mine that didn't.

14 MADAM CHAIR: Is that the letter of
15 January 16th.

16 MS. CRONK: It's the report attached to
17 the letter, Madam Chair. Maybe if the Board could just
18 confirm that they have an introduction page, that would
19 be satisfactory.

20 MADAM CHAIR: This page, an introduction
21 of detailed cut-over assessment?

22 MS. CRONK: Yes. Do you have that?

23 MADAM CHAIR: We have that page.

24 MS. CRONK: Fine. Then I have an extra
25 copy that I can provide the Board.

1 MADAM CHAIR: Thank you very much. That
2 will be Exhibit 1588. And could you describe that, Ms.
3 Swenarchuk.

4 MS. SWENARCHUK: This is a report
5 described in the covering letter prepared by Mr.
6 Clemmer under the supervision of Mr. Marek entitled:
7 Township Site and Volume Cruise Report.

8 The covering letter is dated January
9 16th, 1980. I'll have to count the pages because it's
10 not numbered and I don't know how many --

11 MS. CRONK: 21.

12 MS. SWENARCHUK: 21 pages.

13 MADAM CHAIR: Thank you.

14 MS. SWENARCHUK: And attached to it is
15 also a covering letter from Mr. Marek to Messr. Jarvis,
16 Iverson and McKuen.

17 MADAM CHAIR: Thank you.

18 ---EXHIBIT NO. 1588: 21-page report entitled: Township
19 Site and Volume Cruise Report
20 prepared by Mr. Clemmer under
21 supervision of Mr. Marek with
covering letter dated January 16,
1988.

22 GEORGE MAREK, Resumed

23 FURTHER CROSS-EXAMINATION BY MS. CRONK:

24 Q. Mr. Marek, perhaps you could just put
25 that down for a moment. There are two issues I would

1 like to speak with you about this morning. The first
2 relates to the windrowing of poplar.

3 You'll recall that when we spoke last
4 Monday, when you gave your evidence to the Board last
5 Monday, that is November 19th, you told the Board that
6 you were not familiar with the practice of windrowing
7 poplar, then last Thursday when you were in the course
8 of continuing your evidence, you gave additional
9 evidence to the Board regarding your perspective on
10 what is involved in the windrowing of poplar.

11 And I wish to confirm simply that your
12 evidence last Thursday with respect to the windrowing
13 of poplar reflected your understanding on a theoretical
14 basis really of some of the silvicultural principles
15 involved in the windrowing of poplar?

16 A. Yes.

17 Q. Is that a fair description?

18 A. Yes.

19 Q. Thank you. And so that the evidence
20 before the Board is clear, it's my understanding that
21 you have no personal experience with the technique of
22 windrowing poplar; am I right in that?

23 A. No, we have done, we started --

24 MS. SWENARCHUK: Excuse me, Madam Chair.

25 It was my understanding that Ms. Cronk, rightly, was

1 entitled to ask questions this morning with regard to
2 the Domtar report.

3 Her cross-examination was previously
4 completed and, in my submission, I'm objecting. She is
5 not entitled to ask further questions with regard to
6 other subjects.

7 MS. CRONK: You'll recall, Madam Chair,
8 that on Thursday I specifically asked the Board's
9 permission to cross-examine on this issue at the time
10 that Mr. Marek gave his evidence with respect to
11 windrowing of poplar, and the Board will recall perhaps
12 the reasons for that.

13 Does the Board wish me to review that, or
14 do you recall what occurred?

15 MADAM CHAIR: No. Yes, the Board recalls
16 that when you put the question to Mr. Marek the first
17 time he wasn't sure what you meant, and when Mr.
18 Freidin put the question to him subsequently he had an
19 opinion to give on it.

20 So I think that that's fair for you to
21 ask.

22 MS. CRONK: Just for Ms. Swenarchuk's
23 benefit, it's only that I wanted to be clear that I did
24 raise the issue on Thursday at the time that he
25 expressed the opinion. I will be very short on this, I

1 just wanted to confirm my understanding of it.

2 Q. Mr. Marek, I understand that there is
3 experience with the technique, which is what you have
4 just said, but my question to you was: Am I correct in
5 my understanding that you have no personal experience
6 with the use of windrowing of poplar as a technique; am
7 I right in that?

8 A. I have knowledge on experimental
9 base.

10 Q. Yes. In an operational context, you
11 have no personal experience with that technique?

12 A. No, that's right.

13 Q. Thank you. And, as I understand it,
14 you have not observed the type of windrowing of poplar
15 carried out by E.B. Eddy Forest Products Limited?

16 A. No, no.

17 Q. Thank you. And you are not,
18 therefore, I take it conversant with the silvicultural
19 results achieved by E.B. Eddy Forest Products from the
20 use of this technique?

21 A. Not at E.B. Eddy, no.

22 Q. Thank you. Your comments with
23 respect to poplar in this context, as I understand it
24 then, were with respect to black spruce management
25 only?

1 A. No, no, not at all. I have drawn
2 picture here which represent the experiments I have
3 done with windrowing in mixed wood stands which
4 includes the poplar, of course, association. So that
5 is a experiment which we have done on several occasion
6 and we have certainly results from these experiments.

7 Q. I understand, sir. But I had
8 understood as well your evidence before the Board last
9 Monday on November 19th to be that you never intended
10 to comment on poplar management, per se, but rather
11 that your comments on poplar were with respect to black
12 spruce management only. Was that not what you told the
13 Board?

14 A. That is correct.

15 Q. Thank you. And with respect to this
16 issue of windrowing of poplar, I take it that you would
17 acknowledge then that the foresters who are using this
18 technique in the management of the jack pine/aspen
19 upland areas, for example, those foresters at E.B. Eddy
20 who are doing so, have a great great deal more
21 experience with the technique than do you?

22 A. I couldn't judge, Madam. I have not
23 visited the Eddy operation and any statement which was
24 done by the forester pro and con, I cannot judge from
25 this point.

1 Q. And would it be fair of me to suggest
2 in that regard, Mr. Marek, that the foresters who are
3 using this technique on a consistent operational basis,
4 therefore, have a great deal more experience with the
5 use of the technique than do you?

6 A. Oh, that's correct.

7 Q. Thank you. And would you defer then
8 to their judgment as to its silvicultural effectiveness
9 in an operational context?

10 A. Not necessarily, Madam. I cannot
11 make the judgment of these things.

12 Q. One way or the other?

13 A. One way or the other.

14 Q. That is fine. Thank you very much.
15 Then, with respect to the report which you have
16 provided to the Board by Mr. Clemmer concerning the
17 matter that arose during your cross-examination by Mr.
18 Freidin --

19 MS. CRONK: Sorry, Madam Chair, I
20 neglected to write down the exhibit number.

21 MADAM CHAIR: 1588.

22 MS. CRONK: Thank you.

23 Q. The report, as I understand it, Mr.
24 Marek, was prepared during 1978 to 1980?

25 A. That's correct.

1 Q. And that was at a time prior to the
2 entering into by Domtar Forest Products of its FMA for
3 the Lake Nipigon Management Unit?

4 A. That is correct.

5 Q. It was also prior to Domtar assuming
6 responsibility for renewal activities on the Lake
7 Nipigon Forest Management Unit?

8 A. Yes.

9 Q. As I understand it as well -- it is
10 of course entitled Township Site and Volume Cruise
11 Report by Mr. Clemmer, and as I understand it, it's
12 purpose is set out at page 2 under introduction.

13 Could I ask you to go to that, if you
14 would, please. And I direct your attention to the last
15 two paragraphs on that page at which it is indicated:

16 "Confronted with these problems, George
17 Marek forest management supervisor,
18 Nipigon District, suggested that such
19 poor quality second growth stands on
20 silviculturally treatable sites such as
21 sandy outwashes be liquidated by.
22 full-tree chipping and replaced by
23 vigorously growing spruce and jack pine
24 stands. To examine this suggestion, the
25 Township Site and Volume Cruise was

1 developed..."

2 Stopping there for a moment, that is what
3 this report is?

4 A. Yes.

5 Q. "...was developed with the intent to
6 assess first the forest resource within
7 a 30-mile radius of Domtar's mill at Red
8 Rock for suitability for full-tree
9 chipping; then, second, the site base to
10 determine the silviculturally operable
11 sites where any silvicultural effort
12 would yield the best returns."

13 Those were the purposes of the report?

14 A. That is correct.

15 Q. All right. It was therefore
16 designed, as I read it, primarily to look at the
17 feasibility of using full-tree chippers on a variety of
18 sites and expanding its then current use?

19 A. That's correct.

20 Q. Full-tree chipping. Thank you. Now,
21 as I understand it as well, in 1979 about the time this
22 data was being collected, Domtar was developing its
23 full-tree chipper technology in the area?

24 A. Yes.

25 Q. And am I correct as well -- sorry,

1 Madam Chair.

2 MADAM CHAIR: Sorry, Ms. Cronk. We just
3 noticed that one of the copies we received didn't have
4 the introduction page and the other did.

5 MS. CRONK: Q. Am I correct as well that
6 at around that time, we're talking 1978/1979, domtar
7 was conducting several operational trials around the
8 Red Rock mill regarding the use of full-tree chipping?

9 A. That is correct.

10 Q. All right. The concept, as I
11 understand it, was that the full-tree chipping process
12 would be used to liquidate those areas that were
13 considered at the time to be poor quality second growth
14 forests and then those areas would be replaced by what
15 you describe as vigorous spruce and jack pine; is that
16 correct?

17 A. Yeah. Madam Chair, may I add to this
18 that the reason we tried to liquidate the second growth
19 stands of poplar was mainly because the second growth
20 poplar was of poor quality; in other words, it was No.
21 1, second growth, in other words, the area has been cut
22 before, the second growth with nature's help came in
23 and was poor quality, and we tried to replace it again
24 by spruce.

25 Q. And it was your recommendation that

1 with respect to those parts of the forest characterized
2 in that way that they be liquidated by full-tree
3 chipping and replaced by vigorous spruce and jack pine?

4 A. Correct.

5 Q. Correct. Now, in terms of the extent
6 of the study and what it covered, am I correct that
7 only townships within 30 miles of Domtar's mill at Red
8 Rock were surveyed?

9 A. That is correct.

10 Q. All right. And there were parts of
11 seven townships in total that were surveyed?

12 A. Yes.

13 Q. Only three of which were in the Lake
14 Nipigon Forest Management Unit?

15 A. Yes.

16 Q. And those three that were within the
17 Lake Nipigon Forest Management Unit area were known as
18 Ledger township, Purdom and Booth; is that correct?

19 A. Yes, yes.

20 Q. The other four townships were in part
21 sampling occurred were in the Port Arthur Crown
22 Management Unit?

23 A. That is correct.

24 Q. All right. So am I correct then that
25 a large part of the Lake Nipigon Forest Management Unit

1 per se was not caught by the 30-mile radius, if I can
2 put it that way?

3 A. That is correct.

4 Q. All right. And with respect to each
5 of the seven townships where sampling did occur, am I
6 correct that not all of each township was surveyed?

7 A. Due to the access, yes. There was no
8 possibility to getting into area, so we just have to
9 abandon the effort.

10 Q. So that in fact, due to the access
11 problems, plots were established only where that was
12 possible, having regard to the then existing access
13 network; is that correct?

14 A. Yes. And were not only access, but
15 possibility to get through other means, like
16 helicopters and so, into the rest of the area.

17 Q. The result being that even for those
18 townships where surveying did take place, they were not
19 surveyed in whole?

20 A. Some of them had to be abandoned,
21 yeah.

22 Q. Well, apart from abandoning, of the
23 seven townships where surveying did take place, in none
24 of those seven was each township fully surveyed?

25 A. That's correct.

1 Q. Part only in each?

2 A. Correct.

3 MS. CRONK: And if we look, just for
4 example, Madam Chair -- the pages on my copy of the
5 report are numbered, I don't know if yours are or not.

6 MADAM CHAIR: Some are and some aren't.
7 What page are we going to?

8 MS. CRONK: If you could look first at
9 page 7. Mr. Marek, I don't know if yours are numbered,
10 sir.

11 MADAM CHAIR: Is that Purdom Township?

12 MS. CRONK: Yes, it is.

13 Q. If you could look at the page
14 starting Purdom Township, just for example, page 7, not
15 the tables the text. Perhaps to make this easier, I'll
16 give you another copy of it that has been numbered.
17 Looking at page 7, dealing with Purdom Township?

18 A. Yeah, okay.

19 Q. If you look at the first paragraph
20 under Purdom Township, which you indicated was one of
21 the three that fell within the Lake Nipigon Forest
22 Management area as we now know it--

23 A. Yes.

24 Q. --that management unit.

25 "In Purdom Township, access is extremely

1 poor, as a result only 50 of a proposed
2 141 plots were established."

3 That was the situation encountered?

4 A. Yes.

5 Q. So with respect to Purdom Township,
6 for example, not as many plots as were hoped were
7 established. Then with respect to Booth Township, for
8 example, over on page 9.

9 A. Correct.

10 Q. Booth Township being again one of the
11 three in the Lake Nipigon Management Unit, if you look
12 at the first several sentences under the description of
13 what was done for this township, it indicates:

14 "In Booth Township, except for a narrow
15 strip along the Cameron Falls Road, the
16 township is inaccessible, as a result
17 only 28 plots were established out of a
18 proposed total of 138."

19 A. Yes.

20 Q. So again we have a situation where a
21 very small portion of that township was surveyed?

22 A. Yeah.

23 Q. And so on if we moved through the
24 various townships sampled?

25 A. Yes.

1 Q. Can we agree then, Mr. Marek, that
2 the results of this report, having regard to the small
3 sampling that was undertaken, should not be taken as
4 representative of the entirety of the Lake Nipigon
5 Management Unit that we would now know today as the
6 Lake Nipigon Forest Management Agreement Area?

7 A. No.

8 Q. It is not?

9 A. Yeah.

10 Q. Thank you. And with respect to the
11 same issue then, having regard to the size of the
12 sample taken, can we agree that the percentage of areas
13 shown in this report as being operable for
14 silvicultural treatments cannot be taken as
15 representative of the management unit as a whole for
16 the same reason?

17 A. Conclusively, yes, that is true
18 because we are talking about very specific area, No. 1,
19 which is close to the mill; No. 2, with a specific
20 geology which we thought would be very well fitted to
21 the intensive management.

22 And one point I like to stress here,
23 Madam Chair, is this: That at that time Domtar was
24 prepared to acquire these townships; in other words,
25 they were trying to incorporate them into the future

1 forest management agreement, and I think that is
2 important because when we looked at these townships in
3 this area we thought that this area is suited for the
4 intensive management and, therefore, Domtar was trying
5 to get very close access or the access into the area
6 and practise intensive management.

7 Q. My only point, Mr. Marek, and I think
8 you agreed with me, but I just wanted to confirm that,
9 my only point was, that given the smallness of the
10 survey sample in these townships, the percentage of
11 operable areas for silvicultural treatments indicated
12 in this report should not be taken as representative of
13 the Lake Nipigon Management Unit as a whole?

14 A. In totality, that's correct, that's
15 correct.

16 Q. Thank you. And then as I understand
17 it, the way the results and the discussion section of
18 this report is set out, it deals on the one hand with
19 areas that are described as being operable for
20 silvicultural treatments?

21 A. Right.

22 Q. And then on the other hand it also
23 deals with areas described as being operable for
24 full-tree chipping operations; is that correct?

25 A. Right.

1 Q. So dealing with the second - we have
2 already talked about the first, about the areas
3 operable for full-tree chipping operations - could I
4 ask you to go to page 6, please, which is Table 2?

5 A. Yes.

6 Q. And if we look at Table 2, that sets
7 out with respect to one particular township, for
8 example Ledger Township, what's described as the status
9 of the forest and the site resource in Ledger Township;
10 that's the subject matter of the table?

11 A. Yes, yes.

12 Q. And then if you look at the first
13 footnote at No. 1 it indicates, full-tree chipping
14 standards referenced by McConnell 1979?

15 A. Yes.

16 Q. As I understand it, Mr. Marek, then
17 in determining the percentage of any of the plots
18 surveyed in any particular township of areas that were
19 eligible for full-tree chipping, if I can put it that
20 way, what was used were standards developed by a Mr.
21 McConnell?

22 A. Domtar's employee, yes.

23 Q. Yes, at the time, that's right.

24 A. At the time.

25 Q. Mr. McConnell, as I understand it,

1 was then the logging supervisor for Domtar?

2 A. He was logging superintendent in
3 charge.

4 Q. And it was the standards developed by
5 him that were used to determine whether an area would
6 be eligible for full-tree chipping?

7 A. Yes. He had input into the
8 definition of so-called chipping standards and so on.

9 Q. Yes. And as I understand it, Domtar
10 was then using cut and skid operations with respect to
11 their operational trials for chipping which made it
12 difficult to sort at the chipping site; is that
13 correct?

14 A. That is correct.

15 Q. All right. And Mr. McConnell's
16 standards therefore at the time, and as used in this
17 report, were for pure hardwood or softwood stands; is
18 that correct?

19 A. There was sorting done in order to
20 separate these two species or three species in case
21 white.

22 Q. All right. And so that it's clear
23 for the benefit of the Board, as I understand it, the
24 significance of this is, is that the standards that
25 were used, Mr. McConnell's standards, were for pure

1 stands, hardwood or softwood, not for mixed wood stands
2 because of this sorting problem at the chipping site.

3 Can you confirm that for me, or do you remember?

4 A. No, I think a discussion we had was
5 very simple one. The system for full-tree chipping
6 that time was not that the chippers couldn't chip all
7 these, it was acceptance of these chips into mill; in
8 other words, the sorting had to be done in order to
9 supply the mill with the species, and the conflict
10 occur where, if these species were put together in one
11 van, in other words when they were transported, they
12 had to be sorted out again because you cannot cook -
13 that is a term in pulp and paper industry - you cannot
14 cook these three or four species together because they
15 have different degree of --

16 Q. It caused a problem at the site of
17 resorting?

18 A. That is correct.

19 Q. And the point being, because of that
20 problem, only pure stands, hardwood or softwood, were
21 potentially eligible for full-tree chipping operations
22 not mixed wood stands at the time because of the cut
23 and skid methods being used?

24 A. Well, they prefer pure stands--

25 Q. That's right.

1 A. --for the operation, and the mixture
2 which went to the mill, yes.

3 Q. Yes. My point being this, Mr. Marek,
4 that today Domtar is fully mechanized, as the Board has
5 heard and as you have confirmed, in its full-tree
6 chipping operations, so that the percentage of areas
7 that would be eligible for chipping operations of this
8 kind on this particular management unit would be much
9 higher than shown in this report because it would
10 include mixed wood stands?

11 A. Domtar can still not take wood as it
12 is being cut and chip and take it to the mill as a
13 mixture of chips, Domtar still has to separate these
14 things in order to conform to the standards in the mill
15 itself.

16 Q. Yes. And they are doing it now today
17 though with mixed wood stands as well, though they were
18 not in 1979-80?

19 A. That's right.

20 Q. All right. And could I ask you to go
21 in that regard, please, to page 20, the conclusions
22 section of this report.

23 A. Yes.

24 Q. I would ask you to look at the last
25 paragraph under Item No. 4 in the conclusions, Mr.

1 Marek, which read:

2 "Confronted with these conclusions, the
3 concept of full-tree chipping as a means
4 to economically harvest second growth
5 stands within a 30-mile radius of the
6 Domtar mill at Red Rock is not a viable
7 proposition. If the desire is still to
8 create a silvicultural reserve of young
9 vigorously growing stands close to the
10 Domtar mill at Red Rock, then the
11 existing stands on the silviculturally
12 treatable sites must be liquidated in
13 some manner at a loss."

14 Now, stopping there for a moment. With
15 the advent of full mechanization in Domtar's full-tree
16 chipping operations, can you confirm for me that the
17 view expressed in that last paragraph proved over time
18 not to be accurate?

19 In fact, they have a full-tree chipping
20 operation including mixed wood stands at the present
21 time and it was not as suggested in this final
22 paragraph?

23 A. Yes. Domtar has, Madam, improved the
24 technology, however, it seems to be still not as it
25 should be due to the problem of, No. 1, transportation

1 which means the density of chips or weight of the chips
2 which is being transported to the mill, there is still
3 problem of mixing the chips together; in other words,
4 different specie component; and, thirdly, the problem
5 of sorting the trees on the cutting site.

6 And I think this is one of the problem
7 which have to be resolved in order to make full-tree
8 chipping completely operable over the large number of
9 specie condition and tree condition in this area.

10 Q. And many of those issues are actively
11 being looked at, we talked about some of those last
12 week; is that correct?

13 A. Yes, yes.

14 Q. Well, with respect to the views
15 expressed at the time in the last paragraph of this
16 report, would you agree with me that over time they
17 proved to be inaccurate, that full-tree chipping in
18 fact became a viable proposition with the introduction
19 of full mechanized capability?

20 A. To some degree.

21 Q. My only point being, it's vastly
22 improved since 1979-1980?

23 A. Yes, yes.

24 Q. Yes. And then the final issue dealt
25 with in this report, Mr. Marek, and in the context of

1 the evidence you gave the Board, relates to the
2 percentage of the areas eligible for intensive
3 management.

4 Now, as I understand the report, and I
5 would ask for your confirmation in this regard, we
6 talked about the fact that the report deals with two
7 different issues, the percentage of areas eligible for
8 full-tree chipping on the one hand, and the percentage
9 of areas eligible or operable for silvicultural
10 treatment on the other hand?

11 A. For intensive silvicultural
12 treatment, correct.

13 Q. All right. And what the report talks
14 about with respect to silvicultural treatments are
15 those which were eligible or good, good operably for
16 silvicultural treatments; is that correct?

17 A. I didn't hear.

18 Q. What the report talks about is those
19 areas that were good operably for silvicultural
20 treatments or marginal for silvicultural treatments?

21 A. That's correct.

22 Q. Or poor?

23 A. That's correct.

24 Q. And with respect to those that were
25 good, those are the areas that, based on your evidence,

1 would fall within the eligibility for intensive
2 management?

3 A. That is correct.

4 Q. All right. Could I ask you to go to
5 page 6, please, dealing with Ledger Township.

6 A. Yes.

7 Q. All right. This is the table with
8 respect to Ledger Township that we looked at a few
9 minutes ago, and it sets out the percentage of the
10 areas, the percentage of operable stands for
11 silviculture treatment on the far right?

12 A. That's correct.

13 Q. All right. And overall in Ledger
14 Township what the report indicates is that 80.8 or 81
15 per cent of the areas were eligible for silvicultural
16 treatments?

17 A. That is correct.

18 Q. And by the language that you have
19 been using in your evidence before the Board, that
20 means in that township, based on the plots sampled -
21 obviously only on the plots sampled - almost 81 per
22 cent would have been eligible for intensive treatment?

23 A. That's correct.

24 Q. All right. And Ledger being one of
25 the three that comprised the Domtar Forest Management

1 Unit as we know it today?

2 A. Yeah.

3 Q. And then looking over at page 8,
4 Purdom was the second of the three townships comprising
5 part of that unit?

6 A. Yes.

7 Q. And at page 8 it shows that 30 per
8 cent of the plots in that township were eligible for
9 silvicultural treatments?

10 A. That is correct.

11 Q. And in your terminology, eligible for
12 intensive treatment?

13 A. That is correct.

14 Q. And Purdom is one of those, if you'll
15 recall, where less than a third of the intended plots
16 were able to be established because of accessibility
17 problems?

18 A. Yes, yes.

19 Q. So it was only on those third that
20 were established that a percentage was measured?

21 A. Yes.

22 Q. And then finally, the third township
23 forming part of the Domtar management unit, Booth
24 Township over on page 10?

25 A. Yes.

1 Q. 71.4 per cent of that township was
2 found eligible for intensive management?

3 A. Correct.

4 Q. All right. So just looking at the
5 three that have any bearing to the Lake Nipigon
6 Management Unit, then or today, something much better
7 than 35 per cent of those areas sampled were eligible
8 for intensive management?

9 A. Yes, yes.

10 Q. Thank you. Mr. Marek, those are my
11 questions, thank you.

12 MS. CRONK: Madam Chair, as I'm going to
13 ask the indulgence of the Board to depart and ask my
14 colleague Mr. Cassidy to remain, there were two
15 undertakings that we gave during the course of our
16 discussion with Mr. Marek, our cross-examination, I
17 just wish to inform the Board as to the results of
18 those transcript searched that we made.

19 The first related to Exhibit 1552, that
20 the Board may recall is an article by Foster and
21 Morrison, part of the big black binder that went in.
22 My recollection is it was the Kause article, but I
23 stand to be corrected on that. In any event, it's in
24 the big black binder. It's the 1987 Foster and
25 Morrison article, and I was asked to check to see

1 whether it had previously been marked as an exhibit.

2 It is contained in MNR's witness
3 statement for Panel 9, Exhibit 414A, so it now bears a
4 separate exhibit number because we marked it during the
5 course of Mr. Marek's cross-examination.

6 Similarly with respect to Exhibit 1554,
7 which is the Johnson and Smyth article, 1988, we marked
8 that obviously as a separate exhibit, 1554, and I was
9 asked to check whether it was previously marked. Our
10 search indicates it was not.

11 MADAM CHAIR: Thank you very much, Ms.
12 Cronk.

13 MS. CRONK: Thank you. And there was one
14 more, the Jeglum 1989 article, which appears at Tab 26
15 of the black binder that we provided the Board, and
16 that document forms part of Forests for Tomorrow's
17 source book for Panel No. 3, and we did not give it a
18 separate exhibit number as a result of that.

19 We were asked as well to provide Ms.
20 Swenarchuk with a full copy of the articles from which
21 extracts were taken as appear at Tab 12 of your black
22 book. We have done that, she has the full version of
23 them.

24 There is one outstanding undertaking
25 relating to the extent of the clearcut area in the

1 vicinity of slides 101 and 102, and I hope to have that
2 information for you shortly, but I do not have it for
3 you today.

4 MADAM CHAIR: Thank you very much, Ms.
5 Cronk.

6 MS. CRONK: Thank you. Thank you very
7 much, Mr. Marek.

8 THE WITNESS: Madam Chair, may I have a
9 few comments on this report just to clarify some of
10 these...

11 MADAM CHAIR: Mr. Freidin, are you going
12 to be asking any questions of Exhibit 1588?

13 MR. FREIDIN: No, but I would think that
14 if Mr. Marek wants to make some further comments on
15 this, Ms. Cronk will want to hear them--

16 MS. CRONK: I would rather hear them now.

17 MR. FREIDIN: --and perhaps ask some more
18 questions.

19 MADAM CHAIR: All right, Mr. Marek. If
20 you want to make them very briefly.

21 THE WITNESS: Yeah, just one or two
22 sentence I would like to add to this. The reason we
23 have undertaken this examination of these potential
24 areas for intensive silviculture treatment was
25 extremely simple.

1 We have discovered that many of these
2 second growth stands which were growing in the vicinity
3 of area are not growing according to our expectation.
4 There are some very productive sites around Nipigon and
5 Red Rock which produce after first harvesting, which
6 has been done in 1900 or 1920, produce stands which
7 after examination show pathological effect; in other
8 words, these stands were growing with lots of defects,
9 lots of cull, in other words, quality.

10 But also the area was very productive, so
11 we have decided to examine in more detail to see the
12 potentiality for intensive management in that area
13 close to Red Rock mill, you see, it's cheap timber,
14 it's a short haul, so we have look at it and here are
15 results.

16 We have also flown beside this, this was
17 examination right on the ground; in other words, the
18 foresters went into the field and look at these sample
19 plots. We also have examined area using helicopters on
20 the broader spectrum of this vicinities and we went
21 matter of fact farther up north in order to see what's
22 happened probably in 50-mile radius because obviously
23 mill by itself cannot depend on wood which is in
24 vicinity of 30 miles, we have to have larger area. So
25 we did it, and to our surprise we have found that

1 indeed these "potentially very rich sites" where you
2 can practice intensive management are not as plentiful
3 as we thought.

4 So this is just few words about why we
5 have done it, in order to get the grasp of these kind
6 of goals which I suppose is very important in order to
7 manage the forest and supply to timber to the mill.

8 So we were -- in one part we were
9 disappointed to find this; on the other hand, we had a
10 fairly good idea what the approximation of this
11 productivity ranges are.

12 MADAM CHAIR: Ms. Cronk?

13 MS. CRONK: Madam Chair, a follow up
14 question.

15 Q. Mr. Marek, just so that I am clear,
16 this report concentrated, as you told me just a few
17 moment ago--

18 A. Right.

19 Q. --on those townships within a 30-mile
20 radius of the mill in Red Rock; am I correct?

21 A. That's correct.

22 Q. And on portions only of those
23 townships falling within that radius. We reviewed
24 that?

25

1 A. That's right.

2 Q. Is that correct. And the findings of
3 this report were made only with respect to those areas
4 as indicated in the plots summary in this report; am I
5 correct?

6 A. That is correct.

7 MS. CRONK: Thank you very much.

8 MADAM CHAIR: Thank you,

9 Mr. Freidin?

10 MR. FREIDIN: Okay. One housekeeping
11 matter. When we filed the Northwestern Ontario FEC and
12 then the Northwestern Ontario interpretations, there
13 was a third volume or document that I said that I
14 should provide the name for.

15 MADAM CHAIR: Yes.

16 MR. FREIDIN: And I don't have a copy for
17 the Board at the moment, but the name of it is -- maybe
18 we can mark this as 1531A. 1531 was the
19 interpretations.

20 1531A would be entitled: Field Guide to
21 the Common Forest Plants in Northwestern Ontario,
22 authors Baldwin and Simms, dated 1989 and I will
23 provide a copy of that just to make sure that the
24 documents are all there.

25 MADAM CHAIR: Thank you, Mr. Freidin.

1 CONTINUED CROSS-EXAMINATION BY MR. FREIDIN:

2 Q. Okay. Just a couple of questions in
3 relation to blowdown, just to finish off the matter.

4 MADAM CHAIR: Excuse me, Mr. Freidin.
5 I'm sorry, I had it marked 1532 as the FEC.

6 MR. FREIDIN: As the interpretations, or
7 did you reserve a number?

8 MADAM CHAIR: I had 1532A as the Field
9 Guide and 1532B as the interpretations, and 1532C was
10 reserved for plant identification, and that is this?

11 MR. FREIDIN: That's right.

12 MADAM CHAIR: So it's 1532C.

13 MR. FREIDIN: Thank you.

14 ---EXHIBIT NO. 1532C: Field Guide to the Common Forest
15 Plants in Northwestern Ontario,
16 authors Baldwin and Simms, dated
1989.

17 MR. FREIDIN: Q. Now, Mr. Marek, I guess
18 you better get out your--

19 A. Guidelines.

20 Q. --copy of the Forests for Tomorrow's
21 terms and conditions again, silvicultural
22 prescriptions.

23 A. Yes, yes.

24 Q. And we were on page 2.

25 A. Yes.

1 Q. And when we were talking about black
2 spruce, in particular the leave time, we also had a
3 short discussion about blowdown. And can you advise
4 me, did Ketcheson or any of the others who prepared
5 reports comparing the cost of strip cutting and the
6 cost of open clearcutting include loss to blowdown in
7 their financial analysis?

8 A. Telling the truth, I don't know. I
9 cannot remember right now. I would have to go in the
10 reports themselves to look at it. I cannot remember
11 now.

12 Q. Okay. And will you agree with me
13 that in terms of the leave strip, if one is concerned
14 about blowdown, the longer you leave it standing the
15 more potential there is to lose volume through
16 blowdown?

17 A. Yes.

18 Q. Okay. You also made a comment in
19 your evidence about the potential for natural
20 regeneration from black spruce cones which were lying
21 on the ground?

22 A. Correct.

23 Q. Do I take it that it is your evidence
24 that natural regeneration can occur through that means?

25 A. Correct.

1 Q. And are you able to indicate whether
2 that is a method by which a -- what percentage of the
3 regeneration, for instance, in a cut strip would arise
4 from black spruce cones which would have been left
5 there in slash as opposed to seeding in or from
6 advanced growth?

7 A. Yes, yes.

8 Q. Can you give me any sort of
9 percentage?

10 A. This is very difficult to assess,
11 sir, because it depend on so many aspect of the site
12 condition.

13 If the site is site prepared; in other
14 words, microsites were prepared, of course, the seed
15 may fall from the cones and get established on these
16 microsites. If you have no site preparation, of
17 course, the cones or the seed from the cones have a
18 difficulty to reach the microsites and, of course, the
19 seed may be wasted.

20 So depend on many factors; the age of the
21 slash, the age of the cones, and there are many, many
22 factors which affect this establishment of black spruce
23 from the cones itself.

24 Q. Thank you. Again, following up from
25 last week, in the multi-purpose forest that you have

1 talked about--

2 A. That is correct.

3 Q. --can you use aerial seeding as the
4 first regeneration attempt, or is it like planting, in
5 that it can only be used when natural regeneration
6 fails?

7 A. That is correct.

8 Q. Only when it fails?

9 A. Yes.

10 Q. Thank you.

11 A. Madam, the main reason for natural
12 regeneration is -- or leaving the strips or leaving the
13 seed sources to establish natural regeneration. So
14 that is...

15 Q. I just wanted to clarify this.

16 A. Okay.

17 Q. Is it fair to conclude, Mr. Marek,
18 that with the emphasis that Forests for Tomorrow is
19 placing on strip cuts and block cuts which are
20 described in the terms and conditions here that we've
21 spent so much time on--

22 A. Yes.

23 Q. --that the landscape - and by that I
24 mean large areas not just the forest management unit -
25 but the landscape where timber management occurs will

1 be broken up into many small cuts separated by small
2 strips or patches as opposed to open clearcuts?

3 A. That is correct.

4 Q. Thank you. In terms of mixed wood
5 stands, if you don't plant a mixed wood site to get
6 back conifer--

7 A. If you don't what?

8 Q. If you don't plant it--

9 A. If you don't plant it --

10 Q. --initially--

11 A. Yes.

12 Q. --to get back conifer and you end up
13 with a failure in terms of conifer regeneration, would
14 you agree with me that the site might have changed
15 considerably since harvest?

16 A. The site will not change, sir. Site
17 is very, very permanent but you are talking about...

18 Q. Site conditions in terms of
19 vegetation.

20 A. Tree vegetation, tree species, of
21 course.

22 Q. Okay. Would you agree with me that
23 that changed site condition could result -- assuming
24 now you want to go in and plant because you've got a
25 failure, that that changed site condition could result

1 in increased site preparation including heavy
2 mechanical site preparation if you want to treat the
3 failure through planting?

4 A. Are you talking about intensive area
5 management or are you talking about extensive?

6 -Q. No, I'm talking about what you --

7 A. Multi-purpose forest.

8 Q. The multi-purpose--

9 A. Okay.

10 Q. --where you've tried natural, it's
11 failed, you've indicated that in those circumstances
12 you could go in and you could plant. And what I'm
13 saying to you, it's my understanding that if the
14 failure didn't become apparent for a number of years--

15 A. That's correct.

16 Q. --the site that you would have to go
17 in and plant could be quite different than the site as
18 it existed immediately after harvest?

19 A. Possibly.

20 Q. All right. And would you agree with
21 me that in some of those cases where you want to go
22 back in and plant, that the site would be in a
23 condition where, in order to make it receptive to
24 planting, you might have to engage in heavy mechanical
25 site preparation?

1 A. Possibly.

2 Q. Right. Possibly heavier than that
3 which you might have had to do initially?

4 A. Depends on the site character, depend
5 on specie, depends on many factors.

6 Q. All right. But the general statement
7 you would agree with me, depending on all those things?

8 A. Well, the dynamics of site itself as
9 far as vegetation or ingress of or occupation of, yes,
10 that is very dynamic process and it has been discussed
11 during the hearings on many occasion and I think
12 that's -- we have to face, yeah.

13 Q. Okay. And am I correct, sir, that in
14 the circumstances where you might have to go in and do
15 heavy site preparation in order to have a successful
16 planting, that you might in fact be causing extensive
17 damage to the natural regeneration which had
18 established on that site?

19 A. Well, you mean the natural
20 regeneration, the ingress of perhaps the brush species
21 or ingress of -- I just don't get what...

22 Q. All right. You've cut the site and
23 you've let it go to natural, you leave it for two or
24 three years and you do get some natural regeneration
25 coming back, but you assess it after two or three years

1 and you says, it's a failure, we're not getting enough
2 from natural?

3 A. Oh, you're talking about the primary
4 species are in minorities and didn't come back the way
5 we wished to have them?

6 Q. Right.

7 A. Okay.

8 Q. But you've got some coming back, but
9 then you decide you've got to go in there and because
10 the site conditions are such that you have to do some
11 heavy site prep to facilitate the planting, and you
12 agreed with that.

13 I'm saying, when you go in and do heavy
14 site prep on that site which has got now natural
15 regeneration on it, would you agree with me that some
16 of the natural regeneration would be damaged through
17 the site preparation?

18 A. Well, Mr. Freidin, we are talking
19 about hypothetical question where many factors again
20 have to be involved in the decision of prescription to
21 follow up kind of desire of full stocking or certain
22 stockings to the primary species.

23 If you have a very minor percentage, say,
24 10 per cent or something like that stocking to primary
25 species and your goal is 40 per cent or 50 -- we are

1 talking about mixed wood condition on fairly rich
2 sites, that's what you're talking about, right?

3 Q. Yes.

4 A. Then of course your choice is very
5 clear, if you want to improve it you go and site
6 prepare it carefully, very carefully in order not to
7 damage the 10, 15 per cent which you got already
8 established.

9 Now, of course you going to do heavy site
10 preparation as you stated, and by heavy site
11 preparation I understand you talking about site
12 preparation to cover the total area - that's heavy site
13 preparation - then, of course, you -- but I don't think
14 that's desirable, I think that we should in
15 hypothetical case like this we should very carefully
16 assess what damage could be done by certain site
17 preparation method and act accordingly not to do the
18 damage using other means to do.

19 In other words, we have many choices.
20 When you stated heavy, heavy site preparation you
21 already putting kind of earmark on this kind of site
22 preparation which --

23 Q. All right. Well then, let me just
24 sort of reword the question and not refer to heavy site
25 preparation. If you have natural regeneration on the

1 site and you've got to go in and site prepare to
2 facilitate planting, is it not highly probable that
3 some of the natural regeneration which has in fact come
4 on to that site will be damaged through the site prep?

5 A. Counsel, that all depends on the
6 quality of site preparation you do.

7 Q. And also would you agree that it
8 would also be conditional on the condition of the site,
9 how much of the natural regeneration you had, where was
10 it in relation to--

11 A. Exactly.

12 Q. Where was it in relation to what you
13 wanted to site prepare?

14 A. Exactly.

15 Q. Thank you. If in a multi-purpose
16 forest you have the failure and you want to plant and,
17 let's say you go in and do that, and three years after
18 you plant competition -- vegetative competition is such
19 that your crop trees look like they're just not going
20 to make it, they're not going to survive, in
21 multi-purpose forests will you be permitted to use
22 herbicides to meet your objectives in terms of species
23 and densities?

24 A. I have stated, Madam, previously and
25 quite often that in multi-purpose forestry we try to

1 avoid heavy site herbicides, no use of herbicides.

2 Q. You try to avoid it.

3 A. In multi-purpose.

4 Q. You try to avoid it, but you have
5 said in your evidence, natural fails, go in and plant,
6 and I'm saying, let's say you do that, let's say the
7 competition comes back on the site and it looks like
8 your crop trees are just not going to make it, you're
9 not going to meet your objectives because of
10 competition; in those circumstances, sir, is it Forests
11 for Tomorrow's position that you would be prohibited
12 from using herbicides, or in those circumstances you be
13 allowed to use herbicides?

14 A. You are prohibited to use herbicides.

15 Q. Thank you.

16 A. There is no -- Madam Chair, there is
17 no, to my concept and some of these discussion we had,
18 I think it's fairly clear, in multi-purpose forest the
19 herbicides or chemicals will not be allowed, the reason
20 being the multi-purpose forest should serve other
21 purposes but timber, and I feel that in applying
22 herbicides, chemical, you will interfere with the other
23 uses.

24 MADAM CHAIR: In that case, Mr. Marek, if
25 you discerned beforehand that planting would not be --

1 it wouldn't be possible to plant without a herbicide
2 treatment, you just thought that the chances were not
3 good--

4 THE WITNESS: Correct.

5 MADAM CHAIR: --then you wouldn't plant?

6 THE WITNESS: No, I possibly would plant
7 but I would use other means to get rid of the
8 vegetation which competes. Obviously we have many
9 other usage, we have tending which can be done manually
10 or tending which can be done by -- perhaps techniques
11 we should discover as yet in order to get these
12 results.

13 MR. FREIDIN: Q. Mr. Marek, we have all
14 the evidence about all the different tending methods
15 and I don't intend to get into that.

16 A. No.

17 Q. Okay. In a multi-purpose forest you
18 have said quite clearly now that it is Forests for
19 Tomorrow's position that you must try natural
20 regeneration first and use artificial only if it's a
21 failure?

22 A. Correct.

23 Q. Would you agree with me that until
24 you know exactly what site conditions are going to be
25 like at the point in time where you determine there's a

1 failure--

2 A. You are talking about dynamics?

3 Q. Yes.

4 A. Okay.

5 Q. You're sitting there and you say, I'm
6 going to try natural first, would you agree with me
7 that until you know exactly what the site conditions
8 are upon a failure occurring it's not possible to know
9 what silvicultural prescriptions and exactly what
10 equipment will be required to deal with the site which
11 has failed; is that fair enough? Do you understand the
12 question?

13 A. Well, I know what you mean. My
14 interpretation of your question to me is this: That
15 forester cannot prognosticate or the forester cannot
16 scientifically and analytically document result of his
17 work.

18 Sir, may I point out to you in
19 qualitative forestry, in scientific forestry, this
20 should be minimized and obviously, obviously the
21 forester should know what he's doing. If he feels that
22 failures, unexpected failure will occur it's one thing,
23 but I think in many instances he as professional
24 forester should know what result of his work will be.

25 Q. I understand your point. But I'm

1 saying, let's say at the beginning of the -- you
2 prepare a timber management plan for five years?

3 A. Right.

4 Q. And you know that in the very first
5 year you're going to be attempting natural regeneration
6 on a certain site?

7 A. That's correct.

8 Q. And you prescribe your natural
9 regeneration method such that you hope to achieve your
10 objective in terms of natural regeneration?

11 A. Correct.

12 Q. You have tried to avoid a failure.

13 A. Correct.

14 Q. Now, what I'm suggesting to you is if
15 a failure should occur--

16 A. Correct.

17 Q. --it might occur in the third year of
18 the plan, for instance, you make the assessments and
19 it's just not successful enough.

20 A. Correct.

21 Q. What I'm suggesting to you is that
22 when you're preparing the plan, all right, it would be
23 impossible for you to be able to indicate exactly what
24 prescription you would use and what equipment you might
25 use to deal with the failure because you don't know

1 what the site conditions are going to be like
2 necessarily which is going to give rise to the failure.
3 Is that a fair statement?

4 A. No, I don't agree with that.

5 Q. You don't?

6 A. I think we should account for these
7 changes. If a forester will not get acquainted and
8 have no scientifically sound prognostication or
9 prescription, we are in the game of guessing, we are in
10 game of saying something to the public and to forester
11 himself that he doesn't know very much about the
12 dynamics of the forest, and that proves to me that you
13 cannot put inexperienced in the kind of decision-making
14 process, that proves to me that we should probably have
15 a much better information, if we don't have, it also
16 proves to me that how you going to justify failures to
17 the public through the management planning process and
18 through the plan itself.

19 I think we are not in guessing game, we
20 should be fairly sure what we are doing, otherwise I
21 fail to see the kind of credibility we deserve.

22 Q. I'm just hesitating because I'm not
23 too sure whether we are still on the same wave length
24 or not.

25 A. I hope we are.

1 Q. Every time you plan for success, does
2 it mean you are going to get success?

3 A. Correct.

4 Q. Sometimes when you plan for success
5 you get failure?

6 A. Correct.

7 Q. If you plan for success and you end
8 up getting a failure, at the time that you did the
9 original planning are you always able to predict the
10 exact site conditions and the exact circumstances which
11 will give rise to the failure?

12 A. I think I answer it already, Madam
13 Chair, however, let's say that we all make mistakes,
14 that we cannot predict dynamic of our forest hundred
15 per cent, but it seems to me that if mistakes occur,
16 surely the timber management plan should account for
17 this and say: Okay, the target was not achieved and
18 there should be some kind of statement made what the
19 follow-up will be, and that is a timber management --
20 many timber management, I have seen timber management
21 plans which I have seen in Europe, for instance, deal
22 with this emergency.

23 If the failure occur, what we going to
24 do.

25 Q. And it says that right in the initial

1 plan?

2 A. That's right in initial plan, that's
3 correct.

4 Q. I guess what I'm getting at is the
5 circumstances once you have failure -- let me put it
6 this way: Would you agree that if you wanted to put in
7 a timber management plan what you would do
8 silviculturally if there was a failure of natural
9 regeneration, that it would be reasonable to describe
10 the options from which you would choose once the actual
11 site conditions that you encountered upon failure were
12 known?

13 A. Here we go again. Let's go back to
14 the timber management plan process and timber
15 management plan itself.

16 For certain treatment you have risks
17 involved, Madam, I talk about risks in the past, and I
18 think that one of the things which Mr. Freidin rightly
19 point out, rightly, that we don't have this put into
20 the planning process and failed, that in our timber
21 management plans process right now very little is said
22 about risk taken by doing certain work.

23 In other words, risks, we are talking
24 presently is fire protection, risk of fire, but we are
25 not as yet putting in the process of intensification

1 management or, for that matter, any management the
2 risks involved.

3 So in the proper management plan I see
4 this: If you don't achieve your goals and you mention
5 the risk - and he talking about site degradation or
6 site changes and things like that, which has very much
7 to do with the dynamic of the new forest - you have to
8 put down there are possible risks, and you deal with
9 these risks.

10 Q. What I'm saying is, if you do put
11 down what the possible risks -- all right. Mr.
12 Martel, I think you wanted to ask a question.

13 MR. MARTEL: Well, what worries me is
14 that if we carry that to its logical conclusion -
15 that's what I want to ask Mr. Marek about - is that
16 every site that you prepare for then you're going to
17 have to put down the risk, or the potential for risk.

18 THE WITNESS: Exactly.

19 MR. MARTEL: And I'm not sure that we
20 have enough paper to do all that in a plan. I mean,
21 every plan would have to contain every site and every
22 potential possibility of something occurring and you
23 having to know the conditions which exist prior to it.

24 I think you take the position that if a
25 forester was out in the forest before he started,

1 knowing his land and his area much better, then the
2 possibility of a wrong prescription becomes far less
3 than it is if they are not out there; am I right?

4 THE WITNESS: Right. Sir, I have seen
5 many plans in the world, I have seen them in Europe, I
6 worked with them in Europe, and perhaps the kind of new
7 game which we are in, which confuse all of us, that we
8 should go in more detail general planning, and that is
9 achieved by experience.

10 In other words, you have a forester who
11 has 10, 15 years going to say: Look, I have done this
12 before, what are the risks now, and so. Then you have
13 a newcomer who never been there before, who opens up
14 the book, guidelines, which doesn't say anything about
15 risks, is that so?

16 So this is the problem we are having, and
17 I think that if we going to practise better forest
18 management based on better planning and better timber
19 management planning generally; in other words, put some
20 more credibility into this plan, that you indeed have
21 to incorporate these risks on the site and say: Okay,
22 if and such and such. I know it's going to be more
23 complex.

24 MR. MARTEL: But would you put it in all
25 plans for every site?

1 THE WITNESS: No, no, I am not talking
2 about -- when you talk about plans there is -- we have
3 fairly good idea for timber management plan area what,
4 No. 1, sites we are talking about, working groups we
5 are talking about, risks involved in certain working
6 groups caused by whatever it may be.

7 He's talking about the establishment of
8 the wood, I talking about risk in harvesting which
9 involved in this kind of dynamics being changed. No,
10 we have to have a room for these kind of again "risks"
11 or stability, whatever you may call it, that we don't
12 start wasting lots of money.

13 And we do that, presently we are wasting
14 lots of money because we do not consider these changes,
15 we don't consider these risks and say: Okay, here is a
16 vast area of working groups which may encompass hundred
17 different sites, condition, site conditions, without
18 any risks.

19 In other words, we are talking about
20 linear of our reforestation effort. Everything is
21 linear. We do something, the results will be okay,
22 then results will be okay, and eventually we going to
23 have a new forest in 50, 60 or hundred years which
24 going to be as we prognosticate.

25 No, forest does not work that way, forest

1 does not mean linear progression of our efforts, matter
2 of fact that curve which goes, is very, very strange
3 sometimes, but that's got to be accounted for into
4 management plan.

5 MR. MARTEL: All right. Then you're
6 saying that there are certain conditions which "there
7 might be a risk on" and we should be flagging them then
8 ahead of time, the ones where we think there's
9 potential, and you should be flagging those ahead of
10 time?

11 THE WITNESS: Yes.

12 MR. FREIDIN: I think I'll leave this
13 area.

14 Q. You made a comment, however, before
15 you do, you said forest does not mean linear
16 progression?

17 A. No.

18 Q. What do you mean by that? Are you
19 talking about amount produced?

20 A. Anything. Sir, for last 60 years or
21 maybe even more than that, for hundred years forester
22 in many countries felt that if you plant a tree here,
23 that tree in 10 years will be this size, in 40 years
24 will be this size and reach mature at age of 80 or 150.
25 This what I call linear progression.

1 Q. Yes.

2 A. Now, this may not happen. The true
3 picture or prognostication is not linear, but it takes
4 many curves and shapes; in other words, when you start
5 from zero here you may find that in year 10 you may
6 have tree this size, in year 20 you may have it this
7 size, and all of a sudden at year 60 you have it down
8 to this, according to that curve which develops here.

9 Q. Thank you.

10 A. In other words, there is not that we
11 can say at year one when you plant the trees or you
12 natural regenerate them that trees will be certain
13 position 10, 15, 20, 50 years from now.

14 Q. Yes.

15 A. And this is more dangerous in
16 artificial regeneration than in natural regeneration.
17 In natural regeneration you usually have a fairly steady
18 curve, it's not linear but it's fairly steady; in
19 artificial regeneration, that curve can bounce back and
20 forth many time.

21 Q. Okay. Thank you.

22 A. Thank you.

23 Q. Let's move on to -- I'm just trying
24 to clean up a few things from last week. Looking at
25 Forests for Tomorrow's terms and conditions,

1 silvicultural prescriptions page 2, under black spruce
2 2.1(a) black spruce working group, the second paragraph
3 where you refer to protection forest reserves. Do you
4 remember that?

5 A. That is correct.

6 Q. And we had a discussion, you said you
7 were talking about the old definitions. Are you able
8 to direct me to a document or are you able to recite
9 for me the old definition that you were referring to?

10 A. They were usually under the PFR,
11 protection forest reserve.

12 Q. No, no. But production forest
13 reserve today, you say, has a different meaning?

14 A. There are two meanings, there are two
15 titles and you have got record to it, that MNR is now
16 using the terms.

17 Q. All right. But let's not worry about
18 what the Ministry's term is, I want to know what the
19 definition is of protection forest reserve as contained
20 in Forests for Tomorrow's silvicultural prescriptions
21 here.

22 A. I see.

23 Q. And are you able to point me to a
24 definition or are you able to write it out for me
25 during the break or something?

1 A. No, we can discuss it. Mr. Freidin,
2 the Forests for Tomorrow states very clearly that
3 recognizing only one term, protection forest.

4 Q. Protection forest-reserve is what
5 they have here.

6 A. That is correct. Protection forest
7 reserve is identical with these two statement or two
8 definition by MNR.

9 Q. Those two definitions or statements
10 being what?

11 A. One is production forest, I have it
12 someplace here -- it's in that pamphlet you gave me
13 last night, sir.

14 Q. All right. I gave you -- or asked
15 you to read Attachment No. 4 to Exhibit 5A where the
16 Ministry--

17 A. Classified.

18 Q. --indicated the various
19 classifications within the FRI and they talked about
20 protection forest and production forest reserves.

21 A. Right, protection and production.

22 Q. Now, perhaps the best way we can deal
23 with this is to go to that document, Madam Chair,
24 Exhibit 5A, Attachment 4.

25 A. Right, I got it here. I got it here.

1 Q. Do you have that document?

2 A. Yes, I have that document.

3 Q. Are there page numbers sort of in the
4 bottom right-hand.

5 A. Yes, there is.

6 Q. If you go to page 24.

7 A. Right.

8 Q. In the first full paragraph it refers
9 to protection forest:

10 "(i.e., site class 4)...", and it says,
11 "...the assignment of the protection
12 forest label to a forest stand therefore
13 simply represents the interpretation of
14 the forest stand conditions by the air
15 photointerpreter that there has been poor
16 growth as reflected by height over age
17 relationship."

18 And they gone on and talk about what
19 might cause that. In the next paragraph they talk
20 about a further categorization of the production forest
21 land and they're referring to production forest
22 reserves which is referred to in the third last line of
23 that paragraph, and they say in the paragraph, if you
24 read it, it refers to:

25 "...indicating certain physical site

1 conditions such as steep slopes,
2 exposed bedrocks which may present
3 limitations to operations."

4 A. That's right.

5 Q. Now, are those the two definitions
6 that you refer or the two statements that you refer to?

7 A. That's correct.

8 Q. And do I take it then from your
9 answer then that it is Forests for Tomorrow's position
10 that when we read their silvicultural prescriptions and
11 read the phrase, protection forest reserve--

12 A. Right.

13 Q. --we should include both production
14 forest reserve and protection forest as referred to in
15 Exhibit 5A?

16 A. Correct.

17 Q. All right. That's helpful.

18 And we agreed the other day that all
19 protection forest reserve is not necessarily unstable,
20 fragile or sensitive. And my last hopefully question
21 on this subject matter is this: Would you agree with
22 me that PFR, as we presently find it on FRI maps, is a
23 designation of areas which have the characteristics of
24 production forest reserve--

25 A. And protection.

1 Q. --as defined in Exhibit 5A and does
2 not include protection forest? Putting it -- do you
3 understand it?

4 A. No, I don't.

5 Q. All right. If we go to the FRI map
6 we find PFR on it and we also find PF on some stands,
7 and I'm suggesting to you that PF on FRI maps that we
8 read today means protection forest, and maps which we
9 read -- FRI maps which we read today which have PFR on
10 them mean production forest reserves as defined in
11 Exhibit 5A

12 A. Yeah.

13 Q. Is that right?

14 A. I realize these two terms are used on
15 the FRI maps, and I think for very simply the Forests
16 for Tomorrow combine these two things and say,
17 protection forest reserves as was before.

18 Q. I understand that. I'm just trying,
19 as a matter of clarification, so there's no
20 disagreement between Forests for Tomorrow and anybody
21 else here, if we go to an FRI map PFR on an FRI map
22 today does not mean protection forest reserve as
23 defined, it means production forest reserve as defined
24 in Exhibit 5A.

25 A. Would you enlighten me on this

1 because I'm losing you. I have stated that both terms
2 PFR and PF on present FRI maps symbolize the Forests
3 for Tomorrow protection forest reserves. Now, what is
4 so complex about that.

5 MADAM CHAIR: What is the point of your
6 question, Mr. Freidin?

7 MR. FREIDIN: There are certain terms and
8 conditions here which are going to ask that certain
9 areas known as protection forest reserve--

10 THE WITNESS: Yes. Not cut.

11 MR. FREIDIN: --be marked as PFR on FRI
12 maps. And what I'm referring to, if we go to --

13 MS. SWENARCHUK: 2.3(c).

14 MR. FREIDIN: Page 47 of Forests for
15 Tomorrow's terms and conditions, 2.3(c) it says that:

16 "All shallow soiled sites and sensitive
17 sites shall be identified as protection
18 forest reserve (PFR) on FRI maps and
19 shall be identified on maps as part of
20 the timber management plan."

21 My point is this, Madam Chair, and Mr.
22 Marek, that we already have a designation PFR on FRI
23 maps--

24 THE WITNESS: Yes.

25 MR. FREIDIN: Q. --which means something

1 quite different.

2 A. Yeah, okay. So what Forests for
3 Tomorrow is saying to you, cancel those two and replace
4 both of every them just with the old PFR. That's what
5 Forests for Tomorrow is telling you.

6 Q. Okay. I think I understand now.
7 Thank you.

8 A. Okay.

9 Q. Thank you.

10 A. Madam Chair, you know, I am not quite
11 clear why this distinction was made in the first place.
12 The original inventory was dealing with one
13 identification, it was protection forest reserve.

14 What change, of course, is they added
15 production forest reserve. Now, after I read this, and
16 I am aware of it and I must state it here that the
17 question immediately rise: Why we do it, why MNR is
18 diverting or, say, dividing these two unstable site
19 conditions. They have one thing in common instability
20 and instability here has been divided --

21 Q. According to you they have a common
22 characteristic, not necessarily according to the
23 Ministry.

24 A. Oh I know that, I know the typing, I
25 know what do they say perfectly clear because everybody

1 knows rocky terrains and everybody knows -- but I don't
2 know why this was done.

3 MR. FREIDIN: Well, Madam Chair, it was
4 explained in MNR's evidence to the extent I wish to
5 deal with it and I don't want to get into again here,
6 otherwise we'll --

7 MADAM CHAIR: Thank you, Mr. Freidin.

8 MR. FREIDIN: Q. Okay. So I think we
9 should just move on. Let me go back to term and
10 condition 2 -- pardon me, page 1, we didn't deal with
11 1.1(b), and this is where you indicate that
12 silvicultural prescriptions shall do a number of things
13 including, to the greatest possible extent you want to
14 minimize or prevent any ecological disruptions and to
15 achieve maximum stability of the stands. Do you see
16 that?

17 A. What?

18 Q. (b), 1.1(b).

19 A. 1.1(b), right.

20 Q. You talk about:

21 "Silvicultural prescriptions shall
22 simulate or be guided by natural
23 ecological processes to the greatest
24 possible extent in order to minimize or
25 prevent any ecological disruptions..."

1 A. That's right.

2 Q. "...and to achieve maximum stability
3 of the stands."

4 A. That's right.

5 Q. MNR asked you what you meant by
6 stability, and I believe you referred the Ministry to
7 an article by Van Miegroet?

8 A. Yes.

9 Q. Which is in your source book?

10 A. Yes.

11 Q. Could you turn to that, please. That
12 will be volume --

13 MADAM CHAIR: 1 or 2?

14 THE WITNESS: I think it's in the source
15 book, it's also in my statement.

16 MS. SWENARCHUK: Volume 2, Madam Chair.

17 THE WITNESS: Okay.

18 MR. FREIDIN: Q. Now, you have used this
19 term stability or unstable sites, so I wanted to make
20 sure I had a good understanding of this, Mr. Marek.

21 A. Yes.

22 Q. And I think the definition that you
23 provided in answer to the interrogatory was in fact the
24 definition which is contained in the very first line of
25 the abstract; i.e., forest stability is the capacity to

1 resist perturbation or to revert to the original state
2 after perturbation.

3 A. Yes.

4 Q. Okay. Now, it goes on in that very
5 first paragraph and indicates in the next sentence
6 that:

7 "Forest stability...", going down to the
8 end of the sentence,

9 "...does not imply a steady state."

10 A. That's correct.

11 Q. "Eventual change is induced by
12 modifications of environmental conditions
13 and by the life history of the living
14 components, species and individuals of
15 the ecosystem."

16 I take it you agree with that comment?

17 A. Oh, yes, I do.

18 Q. Can we go to page 25 - I'm going to
19 be flipping back and forth between the abstract and the
20 article for a moment.

21 A. Mm-hmm.

22 Q. Going to page 25, if we go down to
23 the fourth full paragraph in relation to this issue of
24 stability--

25 A. "It is practically impossible...."?

1 Q. No, one more, it says in relation to
2 stability:

3 "Considering the undisputable frequency
4 and intensity of regularly recurring
5 perturbations, it is fundamentally
6 acceptable to consider and to treat the
7 forest as a relative unstable system in
8 which it is advisable to direct
9 ecologically based management towards
10 cyclical change over a maximal period
11 of time."

12 I take it from your evidence that you
13 would agree with that statement?

14 A. Yes, I do.

15 Q. So that when we are looking at
16 achieving maximum stability, it's important to
17 recognize that the forest is a relatively unstable
18 system and we have to take that into account when
19 making management prescriptions?

20 A. Very much so.

21 Q. Okay. Let's go on in the abstract if
22 I might, in the second full paragraph, in the second
23 sentence it says -- in relation to the assessment of
24 stability, it says:

25 "Therefore...", do you have where I'm --

1 A. What page are you on?

2 Q. Right back to 17.

3 A. Yes, yes.

4 Q. The second full paragraph in the
5 second sentence, three lines down it says,

6 "Therefore..."

7 A. Yes.

8 Q. It says:

9 "Therefore, the assessment of stability
10 must be based on analysis of the forest
11 as an ecosystem--"

12 A. That's correct.

13 Q. "--stressing the importance of
14 bio-ecological conditions and
15 Interactions."

16 And it then says:

17 "An adequate scale of time and space
18 giving all kinds of disturbances
19 sufficient opportunity to occur is
20 required."

21 A. Right.

22 Q. Do you agree with that?

23 A. Yes.

24 Q. Would you turn to page 21 where the
25 author expands on what is meant by scale of time and

1 area, and I want to see whether you agree with the
2 elaboration on that. On page 21, right at the very top
3 of the page...

4 A. Yes, "Scale of time..."?

5 Q. Yes. It says:

6 "The scale of time must be large enough
7 to cover the generation period of the
8 species with the highest average life
9 expectancy and by all means long enough
10 to permit the whole range and intensity
11 of perturbations typical for the site to
12 occur."

13 Do you agree with that?

14 A. Yes.

15 Q. What is meant by generation period,
16 is that the period up to pathological rotation?

17 A. That's right, up to steady state or
18 beyond that.

19 Q. All right. But if we're talking
20 about the generation period of the species with the
21 highest average life expectancy, it would be the
22 species which has the longest life?

23 Is that what we're talking about in that
24 area you were looking at?

25 A. Yes, yes.

1 Q. Okay. The author also talks about
2 the area, the scale of area.

3 A. Yes.

4 Q. And says:

5 "The area under consideration...", now
6 this is again when we're trying to determine whether
7 we've got stability.

8 A. Yes.

9 Q. "The area under consideration must be
10 large enough to assure sufficient
11 diversity and to allow
12 perturbations, opening up new sites to
13 take place at intervals no longer than
14 the persistence period of early
15 succession species."

16 A. Yes.

17 Q. And do you agree with that?

18 A. Well, this is -- sir, if you start
19 analyse this sentence that's a very complex statement
20 which implies --

21 Q. The whole article is complex.

22 A. Yeah. No, I think this is what we
23 have to sooner or later be acquainted with. This
24 sentence supply the multi-specie ecosystem which may
25 represent four, five, 10 different species and Mr.

1 Miegroet here is a European of course, he's perfectly
2 aware of the European condition where you find
3 association of many species together and when you talk
4 about the hierarchy of these different species, then
5 he's entitled to this kind of statement here. I know I
6 make --

7 Q. No, no. You say in those
8 circumstances he's entitled to rely on this kind of
9 statement in relation to area?

10 A. No, no, in the total ecosystem.

11 Q. All right. Well, do you not agree
12 that these general concepts apply to the boreal forest
13 as well?

14 A. Oh, yes, they do apply but in
15 different intensity. Sir, you must not forget that we
16 are dealing with one or two species in many ecosystem
17 in boreal forest; you are talking probably dozen
18 species in a smaller ecosystem in Europe and I think
19 qualification what he is doing apply mainly for very
20 complex ecosystem where you have a hierarchy.

21 Q. A hierarchy.

22 A. A hierarchy.

23 Q. Of tree species then you said?

24 A. Of many species.

25 Q. All right. So in the boreal forest,

1 for instance, where you are talking about spruce which
2 occurs in stands which there are fewer, would you agree
3 that the area that we are talking about here is much
4 larger then?

5 A. No, no, here is much larger than
6 Europe.

7 Q. Yes. Okay, thank you. Let's go back
8 to the abstract.

9 A. But...

10 Q. I'm sorry, I don't mean to cut you
11 off.

12 A. Madam Chair, may I point that there
13 is a certain hiearchy here too when you have a black
14 spruce stand, and you have seen according to slides
15 which I presented, the ingress of balsam fir. Okay.
16 So that is very similar to what Miegroet is talking
17 about. We have this dynamic process which is depending
18 on time and Baskerville dealt with it very eloquently,
19 time and space.

20 Q. When we are talking here about area
21 that we're making this assessment on, we're talking
22 about areas which I think you refer to in your Forests
23 for Tomorrow -- if you look at your terms and
24 conditions, you talk about stability of the stands and
25 you have pluralized it. I'm assuming when you make

1 this determination of area stability--

2 A. That's right.

3 Q. --we're looking at areas which are
4 composed of many stands?

5 A. Are you talking about landscape?

6 Q. Yes.

7 A. Okay, landscape.

8 Q. Do you agree with that?

9 A. Well, agree to what?

10 Q. We look at this at the landscape
11 scale to determine whether in terms of area we have
12 stability?

13 A. Yes, because ecosystem are
14 inter-related, yes, we are talking about stability of
15 the landscape too, yes.

16 Q. Thank you. In Item No. -- in the
17 third full paragraph of the abstract it says, and again
18 we're talking about assessing whether forest stability
19 is achieved, again Miegroet says:

20 "The natural or untouched forest is not
21 an adequate model for comparison."

22 A. With what?

23 Q. Well, just take a look, it says:

24 "The natural or untouched forest is not
25 an adequate model for comparison."; i.e.,

1 if you want to determine whether you've
2 got stability, you don't look at whether what's you've
3 got is different than what the untouched or natural
4 forest is -- I think maybe if we go over the page, at
5 least the way I interpret this, turn the page to page
6 18.

7 A. Yes.

8 Q. Maybe this is what he means and this
9 is what I think he seems to mean, is that when we are
10 looking at stability and whether--

11 A. What page number?

12 Q. Page 18.

13 A. Stability down at the bottom?

14 Q. No, no, second full paragraph on page
15 18.

16 A. "All human..."?

17 Q. Yes.

18 "All human interventions whatever their
19 aim must be considered as a
20 disturbance..."

21 A. Exactly.

22 Q. "...to be judged by the same
23 parameters, time, space and intensity as
24 other perturbations."

25 Would you agree with that?

1 A. Mr. Baskerville stated very clearly.
2 When he present his case, I think Baskerville said
3 probably the same thing here.

4 Q. And you agree with that as well?

5 A. Oh, yes, I do.

6 Q. And could we turn to page 21, please.
7 I think I can finish this article before the lunch
8 break. Page 21 under the heading Evaluation?

9 A. Correct.

10 Q. Now, up to this point, Mr. Marek, Van
11 Miegroet has basically had a general discussion about
12 different approaches to--

13 A. Yes.

14 Q. --ecological or forest stability and
15 says in the first sentence here on page 21.

16 "There is no generally acceptable
17 definition of ecological stability."

18 A. Yes.

19 Q. Now, before I go on any further, when
20 I read the article I was assuming that in this
21 particular article, at least the author was equating
22 ecological stability with forest stability. Are you
23 able to confirm whether I am correct or not?

24 A. You are right, there is -- because we
25 know so little about ecological happenings; in other

1 words, we are talking about processes in the forest
2 soil, nutrient cycling and also the steady state. You
3 see the steady state has been discussed by the panels
4 before and there are reservations about "steady state",
5 what does it mean, what implications it has to the
6 total dynamic of forest landscape.

7 And I think this is very same, what has
8 been said before, that there is no general agreement on
9 ecological stability; in other words, we know fairly
10 well what ecological stability means in a comparison of
11 one stand to the other, but as far as total landscape
12 we don't.

13 Q. Okay. Now, he goes on and he says:

14 "It is not clear whether stability in the
15 opinion of leading ecologists indicates a
16 Dampening in the fluctuation of the
17 number of species and individuals or a
18 long period of survival of actual species
19 until their ultimate extinction."

20 A. Exactly.

21 Q. Now, the author goes on and talks
22 about, starting in the very next paragraph, he starts
23 talking were two different views on stability, one is
24 what he calls a deterministic model.

25 A. Here, that is one.

1 Q. All right. No, he talks about a
2 deterministic model in the second paragraph.

3 A. Linear progression, yes.

4 Q. Right. And then on page 22 he
5 describes the opportunistic model of stability.

6 A. That is correct.

7 Q. And we find that discussion starting
8 in the first full paragraph on page 22. And this
9 author says:

10 "For the reasons indicated...", if we
11 look at the second full paragraph on page 22,
12 "...that the opportunistic model of
13 stability is more acceptable from
14 a silvicultural point of view, it admits
15 fairly frequent major and minor
16 perturbations interrupting successions in
17 course, often affecting and deeply
18 modifying actual species configuration."

19 My question for you, Mr. Marek, is: Do
20 you agree with the author that the opportunistic model
21 of stability is more acceptable from a silvicultural
22 point of view than the deterministic model that he
23 refers to?

24 A. Sometimes.

25 Q. Well then, let's leave that for

1 another time, maybe after lunch. It might be a good
2 place to break for lunch, Madam Chair.

3 MS. SWENARCHUK: Might I ask a question
4 at this point. My colleague Mr. Lindgren is anxious to
5 know whether he should be producing Dr. Payne to
6 commence Panel's 2 this afternoon?

7 MR. FREIDIN: No.

8 MADAM CHAIR: I think it's clear, Ms.
9 Swenarchuk, we won't be getting to Dr. Payne this
10 afternoon.

11 MS. SWENARCHUK: I will tell him that,
12 and we won't be seeing him this afternoon.

13 MADAM CHAIR: Is Dr. Payne in town or is
14 he --

15 MS. SWENARCHUK: He's arriving today.

16 MADAM CHAIR: And so tomorrow, if he were
17 finished at noon, we could bring Dr. Payne on?

18 MS. SWENARCHUK: Yes.

19 MADAM CHAIR: Thank you.

20 All right. Shall we break for lunch now
21 and we will be back at two o'clock.

22 ---Luncheon recess taken at 12:00 p.m.

23 ---On resuming at 2:00 p.m.

24 MADAM CHAIR: Please be seated.

25 Mr. Freidin?

1 MR. FREIDIN: Q. Mr. Marek, we had a
2 discussion yesterday about, or last week about people
3 having a common objective and there perhaps being a
4 difference of opinion at the management unit level as
5 to how one might go about achieving that objective, you
6 know, who made the ultimate decision, and I wanted to
7 refer you to certain evidence of Dean Baskerville and
8 obtain your views on what Dean Baskerville has said in
9 that regard.

10 Could you turn to Volume 168, please.
11 Volume 168.

12 A. Yes.

13 Q. Could you turn to page 29894.

14 A. 298...?.

15 Q. 94.

16 A. 94, yes.

17 Q. Now, 29894.

18 A. 29894.

19 Q. Now, this is during cross-examination
20 by me, and Dean Baskerville and I were discussing an
21 article that he had written entitled: Management of
22 Publicly Owned Forests. And starting at the bottom of
23 the page on line 24, almost at the bottom--

24 A. Yes.

25 Q. --I asked:

1 "Could you explain what you meant in the
2 last sentence of the third paragraph
3 where you state that "the design of
4 forest management to reach specified
5 goals is primarily a technical matter
6 with little room for public negotiation?"

7 Answer:

8 "In the end, Mr. Chairman, there will be
9 for a management unit, say, a target for
10 availability of particular kinds of
11 moose habitat, as we discussed earlier,
12 for availability of sawlogs, for
13 availability of pulp and so on."

14 And then he says:

15 "Once that target is determined by
16 whatever means, the combination of mixes,
17 the designs of the harvest schedule and
18 the silvicultural schedule which will,
19 when implemented, over time deliver the
20 availability desired is a technical
21 matter. It has to do with cause/effect
22 understanding of the tools of management
23 and of the responses of the stand to the
24 application of those tools."

25 Would you agree with Dean Baskerville's

1 comment about -- in that last paragraph, about the
2 relationship between the objectives and the
3 silvicultural methods of actually achieving them?

4 A. Yes, that is an opportunity for the
5 manager to apply and use the tools.

6 Q. Okay. Would you agree with me, Mr.
7 Marek, that if the Ministry or the provincial
8 government develops with public input provincial
9 objectives or targets in terms of, let's say the amount
10 of timber production, that each forest management unit
11 would be a contributor to the achievement of that
12 broader objective?

13 A. That's right.

14 Q. Would you refer in the same volume,
15 sir, to page 29889. If you just go back a few pages,
16 889. Yes, 29889.

17 A. Yeah. I have it here, yes.

18 Q. Where there was a discussion
19 regarding the relationship between provincial
20 objectives and what occurs at the forest management
21 unit level.

22 A. Yes.

23 Q. I asked Dean Baskerville, starting on
24 line 17, the following question:

25 "Can we agree that the activities on any

1 particular forest management unit or a
2 wildlife management unit could affect the
3 achievement of that larger objective?"

4 Answer:

5 "I would go further, that the opportunity
6 to reach an objection at some higher
7 level would be conditioned by the degree
8 to which the activities at a unit level
9 where the actual design and
10 implementation take place are consistent
11 with that higher objective."

12 Do you agree with his observation?

13 A. I do.

14 Q. Do you agree, sir, that timber
15 management is a long-term project and that action on
16 each forest management unit over time to achieve that
17 management unit's contribution to the overall objective
18 would be necessary?

19 A. Yes.

20 Q. Would you agree, sir, that once that
21 long-term objective for a forest management unit is
22 developed that you would require the dollars and the
23 manpower and commitment to deliver that contribution?

24 A. Yes.

25 Q. Would you turn to page 29891 of this

1 article, please, or this transcript.

2 A. 298...??

3 Q. 91.

4 A. 91.

5 Q. Next page.

6 A. Okay, yeah.

7 Q. Starting at line 9, Dean Baskerville
8 describes -- again talking about the relationship
9 between forest management units and the achievement of
10 provincial objectives.

11 A. Yes.

12 Q. I asked him:

13 "Where you have got this provincial
14 objective and you want to achieve it
15 through the activity on all these
16 management units, would you agree that it
17 would be unreasonable to give any one
18 management unit the level of autonomy
19 that would allow it to in fact say: No,
20 we think on this unit what we want is
21 wilderness not timber management."

22 And I repeated the question the same way.

23 "I'm suggesting that that would be
24 unreasonable...", is what I said to Dean
25 Baskerville, and he said:

1 "If not unreasonable, certainly
2 danagerous and it comes back to this
3 issue of whether or not there is a
4 vertical nesting in both directions,
5 upwards, or the capabilities of the
6 forest to determine the provincial wide
7 objective and downwards...", et cetera.
8 Do you agree with what he said?

9 A. Yes.

10 Q. Do you agree, sir, that if on a
11 particular management unit as a technical matter you
12 had to engage in a particular silvicultural activity,
13 example, certain type of mechanical site preparation to
14 deliver or produce that forest management unit's
15 contribution, that the forest manager would have to be
16 permitted to implement that site preparation?

17 A. Yeah, very specific, Mr. Freidin,
18 there and I wonder if this may conflict or may not
19 conflict with the timber management plan.

20 As you know, so far in your discussion
21 with Dr. Baskerville you didn't mention a timber
22 management plan itself; in other words, you talking the
23 hierarchy that -- the politician or the Minister has a
24 certain objective, agree with parliament, agree with
25 the philosophy which is designed and it goes strictly

1 down to the unit manager.

2 And I have to be very careful there where
3 I going to put certain privileges, professional
4 privileges into the hands of the unit manager himself
5 in order to be in line of the objective of the
6 government.

7 And I don't know if you, Madam Chair, if
8 you realize what I am hinting at; that is, when unit
9 manager is faced with a situation where, to the best of
10 his knowledge and professional integrity he will say, I
11 disagree. Is that what you are aiming at?

12 Q. Sorry, the last point you said was
13 what?

14 A. That he may be allowed to disagree
15 with certain direction from the above.

16 Q. Let me be more direct.

17 A. I like to hear that.

18 Q. You have indicated that and have
19 recommended that there be certain areas set aside for
20 single purpose--

21 A. That's right.

22 Q. --intensive management, and as I
23 understand your evidence, and you believe that that is
24 something that the government will have to come to
25 grips with in terms of setting their objectives or .

1 enunciating their philosophy.

2 A. As a philosophy or policy of
3 government.

4 Q. All right. A philosophy or policy of
5 government.

6 A. Correct.

7 Q. And if they adopted your view they
8 would say, here are the areas based on certain criteria
9 which are now designated for intensive forestry?

10 A. Correct.

11 Q. And would you agree with me, as I
12 understand your evidence, you said one of the tools
13 that would have to be made available or be available to
14 practise intensive forestry would be herbicides, in
15 intensive forest areas?

16 A. Yes, yes, yes.

17 Q. Okay. And the subject matter of --
18 and I take it you would need to know that in the
19 context of a provincial program, because when you did
20 your bottom-up analysis as to how much timber you could
21 produce, you would have to know what tools were
22 available to the forest manager in order to try to
23 deliver the target; is that correct?

24 A. Who would have to know? You see --

25 Q. The forest manager--

1 A. Well --

2 Q. --would have to know whether or not
3 he has available to him, in the case of intensive
4 forestry, whether he can or cannot use herbicides.

5 A. That will be part of the timber
6 management plan which has been approved by government.
7 So in other words, the flow of this information goes in
8 a kind of circle and, obviously, when the government
9 will agree through the management planning process and
10 through the approval of the plan itself that in certain
11 areas intensive management will encompass the herbicide
12 spraying, and so that is...

13 Q. Right. What I'm suggesting to you
14 though, using your example, intensive forestry.

15 A. Yeah.

16 Q. Once the government has decided as a
17 matter of policy or philosophy that it wants to have
18 intensive forest management in some areas--

19 A. Right.

20 Q. --which includes the use of
21 herbicides where required.

22 A. Yeah. Yes.

23 Q. That the use of that herbicide--

24 A. Beg your pardon?

25 Q. Whether you use that herbicide in a

1 particular management unit in a timber management plan
2 on intensively managed area, is a technical matter
3 whether it's required, but it is not a policy matter
4 which gets reviewed every five years by the public who
5 have input into that timber management plan?

6 Do you understand what I'm saying?

7 A. Well, I think it's fairly logical.
8 If you have a green policy for certain areas, again,
9 agreed by the government, written down in a management
10 plan, the unit manager knows exactly what to do and
11 what not to do, what to use and what not to use. I
12 think it's fairly logical.

13 Q. I don't think we are understanding
14 each other. If you are managing a plantation or
15 managing an area intensively, Mr. Marek, and you decide
16 and you've set forward your long-term goal for that
17 area.

18 A. That will be in the management plan.

19 Q. All right, it will be. But I'm
20 suggesting to you, once the area has been designated
21 for that use and you in your timber management plan
22 have started all your silvicultural prescriptions and
23 all your planning to do that, the next time you prepare
24 a timber management plan five years from then, that
25 decision to use herbicides, if it's required, can't be

1 changed by public input at the timber management
2 planning level on the basis that somehow herbicides are
3 bad?

4 A. No, no, no, this still have to be
5 approved by the government and--

6 Q. No, no.

7 A. --and any amendments -- are you
8 talking about amendments now?

9 Q. No, I'm not talking about amendments.

10 A. I don't know what you're talking
11 about.

12 Q. If you go -- all right. If you have
13 a timber management plan and it's in an intensively
14 managed area.

15 A. Right.

16 Q. And you decide that you are going to
17 plant and you are going to eradicate any competition,
18 okay?

19 A. Yes.

20 Q. And in the third year of the plan you
21 plant the area?

22 A. Yes.

23 Q. And the timber management plan
24 basically says--

25 A. That you are going to plant.

1 Q. --you are going to plant the area and
2 if you're projecting what you're going to do, you're
3 going to tend the area and you're going to use chemical
4 herbicides if required.

5 A. It's all written down.

6 Q. I'm suggesting to you if the next
7 time you plan, at the end of the five years you still
8 haven't had any competition, if you have competition in
9 the eighth year of the plan -- pardon me, if in the
10 second plan you decide that you were going to
11 chemically--

12 A. Second plan.

13 Q. You have a plan prepared every five
14 years, Mr. Marek.

15 A. Yes.

16 Q. If you believe that you have to apply
17 chemicals to properly manage the plantation--

18 A. Yes.

19 Q. --the intensive plantation, I'm
20 suggesting to you that the decision or the -- pardon
21 me, the availability of the tool of herbicides cannot
22 be reviewed when you prepare your second plan?

23 A. Of course.

24 MS. SWENARCHUK: Reviewed by whom?

25 MR. FREIDIN: Q. It doesn't make sense

1 that that tool should be taken away from you at that
2 stage; does it?

3 A. Okay. May I express what I feel you
4 are talking about.

5 Q. Sure.

6 A. At the end of the first period of
7 management planning of the operating plan, somebody
8 going to decide in the public view or some input will
9 be into it that there shouldn't be spraying, is that
10 correct?

11 Q. There should...

12 A. There should not be spraying.

13 Q. That isn't the example I gave you. I
14 am talking about the example of intensive --

15 A. I know. I think somebody have to be
16 referee here.

17 MADAM CHAIR: Mr. Freidin, your question
18 is obscure to us. What are you getting at?

19 MR. FREIDIN: Q. We talked about who
20 should decide certain issues when there is a lack of
21 consensus at the management unit level.

22 A. This is pretty obvious, sir. I mean,
23 in timber management planning you as decision-maker,
24 decision maker is, No. 1, Minister or high position
25 bureaucrat who eventually signs it, approves it

1 according to my knowledge with the input of all these
2 people who are taking part in management planning
3 process.

4 And if that process is right, and I think
5 it's signed by the representative of the Minister, then
6 there is no choice. I mean, we just follow this plan
7 and I just cannot see how this -- I'm sorry, Mr.
8 Freidin, but...

9 MR. MARTEL: Well, could I back up
10 because I'm confused. I read where you started from,
11 29895, and it says that - and this is the quote you
12 used - the design of forest management is to reach
13 specific goals and is primarily a technical matter with
14 little room for public negotiation.

15 And I guess what I'm getting mixed up on
16 is, when you go to the second five-year plan you seem
17 to be implying that all that's really left for
18 consideration is the design of a plan without any
19 opportunity for someone to object to that technical
20 matter, whatever it might be, that it's left entirely
21 with the unit forester who must follow the dictates
22 from on high, and there really isn't anything at issue
23 except that a forester should not be involved.

24 MR. FREIDIN: No. Let me put it this way
25 and -- maybe I won't have to deal with this and I can

1 deal with it at a later date.

2 I'm not saying that the issue of whether
3 or not a herbicide is necessary for effectiveness
4 purposes is not up for grabs, you can always in a
5 timber management plan always talk about whether it's
6 effective, it's needed for silvicultural effectiveness.

7 What I'm saying, what I'm suggesting to
8 the witness is, that if you have a timber management --
9 that certain decisions in terms of the availability of
10 tools, not whether you use them in any particular case,
11 but the availability of them, is a decision which does
12 not get made at the management unit level, that if the
13 government or this Board -- or this Board should decide
14 as a matter of policy that herbicides can be used, then
15 I'm suggesting to the witness that forest managers will
16 determine how much they can produce with those tools
17 which have been made available to them, and if forestry
18 is a long-term project, you can't have programs start
19 at the management unit level based on the information
20 and reliance on availability of certain tools and then
21 take that tool away from them five years later, or have
22 that whole issue about whether it should be an
23 available tool canvassed within timber management
24 planning at the management unit level.

25 That's the point I'm trying to make. If

1 the witness can comment on it, that's fine; if not, I
2 can deal with it at a later time.

3 MR. MARTEL: No, but can I clear it up,
4 because it seems to me what you're saying is once
5 you've got the tool, I mean, there's no objection to
6 the tool being there and it might be incorporated in
7 the first five-year plan, let's say it's a 20-year
8 plan, the first five years it's incorporated as one of
9 the options available to the forester, but what seems
10 to go one step further, is that in the second year, in
11 the second five years of the 20-year plan that in fact
12 the forester doesn't have a right to say, I can use
13 something else other than that.

14 MR. FREIDIN: Oh, no, no, no, I'm not
15 suggesting that.

16 MR. MARTEL: You're just saying it
17 remains as a tool --

18 MR. FREIDIN: That tool should be
19 available. If the forester decides that it's not
20 necessary and he can achieve the same results some
21 other way, that's fine. I'm not saying that for a
22 second, that he can't -- that he has to use the tool.

23 In any event, this sounds like it's
24 getting into argument as opposed to questioning and
25 maybe we should move on.

1 MADAM CHAIR: Ms. Swenarchuk?

2 MS. SWENARCHUK: If you're going to move
3 along, I will save my comments.

4 THE WITNESS: Madam Chair, I honestly
5 wish I could resolve it, but I have a problem to, No.
6 I, get it in a context which would be somehow practical
7 in the forest management because, Mr. Freidin, you know
8 that forest management plan use many tools and forest
9 management plan is also not the document which cannot
10 be changed, we know that.

11 However, everything what we do change,
12 everything what I will be allowed or not allowed to do
13 or use these tools in the process of implementation
14 very much depend on the ground rules of the management
15 plan, so when management plan say that such a
16 techniques will be used, such a prescription will be
17 used during the first period, and among them will be
18 herbicides, okay, we agree on that.

19 MR. FREIDIN: Q. Keep going.

20 A. Okay. And all of a sudden George
21 Marek going to come at public meeting the beginning of
22 the second period when the second period or second
23 five-year plan will be prepared, operating plan will be
24 prepared, and start raising hell, objecting to that
25 tool being used in the past. That is the herbicides,

1 right?

2 Q. Keep going.

3 A. No, no, tell me if...

4 Q. Sounds like you're sort of getting
5 close.

6 A. I'm glad, perhaps we are going to
7 agree on something here. Okay. So at the public
8 hearings I going to say I don't like herbicides.

9 Q. By the way, are you the forester now
10 or are you the public?

11 A. No, no, I am talking in general. I
12 am talking in general mostly, this is kind of overview
13 on it so we can agree on something here.

14 Okay. The argument against herbicides
15 will be so strong that I as public, I as the public
16 going to win that battle before the management planning
17 board or what you call the, management planning --
18 what's the name?

19 MADAM CHAIR: Team.

20 THE WITNESS: Team, and team going to
21 say, from now on, due to the arguments of this group,
22 we will suggest into the management plan no use of
23 herbicides. Okay, is that close by?

24 The decision on the recommendation will
25 be put in the first phases of the management planning

1 process, there will be stated that George Marek object
2 strongly to the use of herbicides, also perfectly
3 well-known was approved in the first plan.

4 Sure, the decision-making process does
5 not stop there, surely that process continues, and that
6 is the purpose of this fairly complicated management
7 planning process, and that will be decided on levels
8 higher up and if Minister eventually going to say, due
9 to the arguments, due to the indication before me - or
10 in this case not the Minister but will be the fellow
11 who is below him - and going to amend these things to
12 such a way that herbicide will not be used.

13 So the forester hasn't got a choice, he
14 just have too bad, going to say: I don't agree with
15 that, I object to it, I feel that I have been undercut
16 in my -- because I feel strongly the herbicides should
17 be used because we use it in the past and we had and so
18 on, and all of a sudden the axe will come down, the
19 forester will be faced that he will not be using
20 herbicides and he will be probably forced to use
21 alternate methods.

22 And this is the kind of process I
23 understand. Does it fit into your...

24 Q. What if we put the shoe on the other
25 foot and the forester doesn't want to use it, or the

1 public don't want to use it, but the plan goes all the
2 way up and the government decides we have set a
3 provincial target.

4 A. Yes.

5 Q. All the management units have to
6 contribute -- let's say this happens on 15 different
7 units.

8 A. Yeah.

9 Q. You say, as a matter of policy this
10 is a tool which we believe is an acceptable one to use
11 and we can't meet our production objectives unless we
12 use it, therefore, notwithstanding some people don't
13 like it, we still feel it's necessary to use it. Is
14 that an option?

15 A. Of course, the alterations is for
16 this -- surely, and that's going happen frequently I
17 suppose in the conflicts we have not to use, there has
18 to be some decision-maker, and that decision-maker is,
19 of course, the higher ups who will eventually decide.
20 Is that resolved now?

21 Q. Enough for me to move on to the next
22 question.

23 A. Okay.

24 Q. You had a discussion with Ms. Seaborn
25 about monitoring and about the need for perhaps

1 monitoring beyond the free to grow stage. Remember
2 going in and looking at your forest after free to grow?

3 A. Yes.

4 Q. I got the impression that you weren't
5 speaking about a formal survey, but rather you were
6 talking about a forester doing what is part and parcel
7 of practising forestry and, that is, keeping a watch on
8 the forest, sort of going out there on a regular basis
9 to see how things were doing?

10 A. Monitoring dynamics of the stand,
11 okay.

12 Q. Right. But I take it that you
13 weren't talking about some formalized type of survey
14 like a stocking survey, that is done as a matter of
15 course in five years?

16 A. No, I didn't say that, Mr. Freidin.

17 Q. That's what I'm saying.

18 A. I said it's a combination of these
19 two things. Madam Chair agrees, we discussed this too,
20 and I think it was Mr. Martel who came up with some
21 kind of more detailed, you know, suggestion to monitor
22 these results, if it's stocked or not stocked, if you
23 have a good forest or bad forest. I think that's
24 initiated.

25 Q. My question is, do we need a

1 formalized -- were you saying that we need a formalized
2 sort of survey at some stage after free to grow?

3 A. Yes.

4 Q. All right. That is what I wanted to
5 know. Thank you. Can you pull out your terms and
6 conditions, Forests for Tomorrow's terms and
7 conditions, please.

8 A. Yes.

9 MR. CASSIDY: Is this Exhibit 1416A?

10 MR. FREIDIN: Yes.

11 MADAM CHAIR: That's right.

12 MR. CASSIDY: Thank you.

13 THE WITNESS: 1416A, yeah.

14 MR. FREIDIN: Q. Okay. Could you turn
15 to page 3, please.

16 A. Yes.

17 Q. Jack pine working group, subparagraph
18 (c).

19 A. Yes, yes.

20 Q. Forests for Tomorrow are recommending
21 a term and condition that cut-overs in the jack pine
22 working group shall not exceed 100 hectares in area.

23 A. Yes.

24 Q. Could you please advise me what the
25 silvicultural rationale for this limitation on cut size

1 is?

2 A. The reason we have proposed that the
3 area of jack pine cut-over should not exceed hundred
4 hectares, which is close to 300 acres which is half a
5 square mile, was very simple: We believe that the
6 larger the clearcut the more environmental damage the
7 cut-over may be open to.

8 For instance, on large clearcut I have
9 witnessed quite frequently severe damage of frost on
10 young established seedlings or germinants. On many
11 occasion, even in the jack pine working group, the
12 drought condition could prevail. The larger the
13 clearcut the better opportunity for drought to occur,
14 again causing desiccation of young germinants.

15 The third reason for this is also the
16 problem of insect and diseases. We went -- I
17 personally went through the scleroderis problem and
18 I've elaborated on that in my slides, Madam Chair, this
19 scleroderis, you know, the trees turn brown.

20 MADAM CHAIR: Yes, Mr. Marek.

21 THE WITNESS: These were large clearcuts
22 of several hundred hectares where scleroderis move very
23 freely and eventually infecting. We have a problem of
24 jack pine budworm, of course, and I could call many
25 other agents which I personally feel have a much freer,

1 freer access and freer, I would say, spread and
2 infestation possibility on the larger clearcuts.

3 So we were talking of what it should be,
4 should be 150 or 50 hectares or 20 hectares, and
5 perhaps knowing size of some of these original fire
6 originated stands in the northwestern and northcentral
7 Ontario which may go for, say, up to thousand hectares
8 in some of the flat -- that's what we probably...

9 We decide that hundred hectares probably
10 would be the kind of area which -- clearcut area which
11 would prevent some of these causes for improper and bad
12 regeneration successes.

13 MR. FREIDIN: Q. Okay. So you say there
14 are three reasons, drought, frost and insect and
15 disease s?

16 A. Many of them.

17 Q. Right?

18 A. Yes. Just one of them.

19 Q. Those are the three reasons?

20 A. Yeah.

21 Q. Okay. What do you propose would
22 happen with these terms and conditions if you had a
23 jack pine stand of 110 hectares and the forester wants
24 to cut the entire stand, didn't want to leave 10
25 hectares sitting there. I read them, it says you can't

1 do that.

2 A. Would you repeat this again, sir?

3 Q. The way I read these terms and
4 conditions, if a forester ran into a 110-hectare jack
5 pine stand, he couldn't cut the whole stand, he'd have
6 to leave 10 hectares?

7 A. So he leave 10 hectares.

8 Q. Do you think that's reasonable?

9 A. Oh, I think so. What's wrong with,
10 leave 10 hectares. That's 35, 40 acres a considerable
11 patch of timber which may serve moose as kind of
12 protection.

13 Q. From a silvicultural point of view,
14 does it make a lot of sense to leave 10 hectares out of
15 a 110-hectare stand?

16 A. Sir, in silviculture sometimes
17 individual tree makes a difference, individual tree not
18 hectares, but individual tree in many prescription I
19 have dealt with in silviculture, I'm talking generally,
20 even single tree can make a difference.

21 Q. How is a single jack pine tree going
22 to make a difference in a 110-hectare clearcut?

23 A. Why do we leave one single chico in
24 some of the forested area for protection of owls and...

25 Q. I'm talking silviculturally, sir?

1 A. Silviculturally?

2 Q. Yes.

3 A. It's good seed source.

4 Q. Jack pine?

5 A. Yes.

6 Q. Standing jack pine is a good seed
7 source?

8 A. Yes, yes. To your big surprise, yes,
9 sir, because...

10 Q. Mature jack pine?

11 A. Sir, I have seen many areas which
12 were naturally regenerated from seeding from the jack
13 pine.

14 Q. From mature jack pine?

15 A. That's right.

16 Q. Thank you.

17 A. It doesn't regenerate the entire
18 area, I agree with you, it's spread the seed probably
19 in a square around many acres, bt yes.

20 Q. Thank you.

21 A. Seed tree system of Scotch pine in
22 Sweden and Scandinavia and in central Europe is very
23 frequent they will leave one tree per hectare

24 Q. Thank you very much, Mr. Marek.

25 A. Yes.

1 Q. Let's move on to the next paragraph
2 under jack pine working group, it says:

3 "On coarse sands and gravel sites
4 clearcut strips up to 100 metres shall be
5 used with the cone-bearing slash left on
6 the site."

7 And what is the silvicultural rationale,
8 sir, for strip cutting these? We have already been
9 through the cone-bearing slash issues.

10 A. That's right.

11 Q. I don't want to get into that again.
12 But what's the silvicultural rationale for requiring
13 these particular jack pine sites, coarse sands and
14 gravel sites to be strip cut?

15 A. Because coarse sands and gravel sites
16 may have serious deficiencies of water. The water
17 percolates very quickly through the stratas and in many
18 instances, of course, that means that the young
19 germinants and especially young stand has got the kind
20 of biological environment and physical environment
21 which may improve the stand growth.

22 Q. And so you believe then that
23 following this prescription will have beneficial
24 effects in terms of--

25 A. Silviculture.

1 Q. --silviculture, but in particular
2 because of moisture?

3 A. Yes. Again, Madam Chair, please know
4 that we are prescribing treatment here on coarse sands
5 and gravel sites; in other words, these are specific
6 sites which always, always have a problem with
7 moisture.

8 Q. Okay. White pine is something that
9 you are not dealing with; is that correct?

10 A. No.

11 Q. You are not dealing with it?

12 A. No.

13 Q. Red pine you are not dealing with?

14 A. No.

15 Q. In terms of the poplar, what's the
16 silvicultural rationale for limiting the sizes of the
17 clearcut in a poplar stand to 50 hectares or less?

18 A. Madam, I have dealt with this issue
19 previously. I spent, I bet you, 10, 15 minutes on this
20 explanation why FFT is recommending this size.

21 MADAM CHAIR: I don't recall the
22 evidence, Mr. Marek, for poplar with respect to 50
23 hectare clearcuts.

24 THE WITNESS: Was connection --

25 MADAM CHAIR: You have given us lots of

1 evidence on poplar, but I don't...

2 THE WITNESS: Okay. The evidence is
3 here. For several reasons, one reason being that in
4 poplar stands we also have a problem with frost damage.

5 I have examined -- during my forestry
6 time I have examined many stands which are regularly
7 hit by frost and it usually occurs that the annual
8 height growth is being reduced, that is the effect.

9 I also have seen many insect and problem
10 on young poplar which I think should be somehow
11 minimized by having smaller area of cuts.

12 You see, the reason I am prescribing
13 partial cutting is mainly due to the problem which
14 appears to me right across Canada, that large area
15 clearcuts usually have a higher risk of many agents and
16 I think there are environmental damage, there is damage
17 by insects and diseases and I think...

18 MADAM CHAIR: Excuse me. Mr. Marek, did
19 you say damage by agents?

20 THE WITNESS: Damage.

21 MADAM CHAIR: Did you use the word agents
22 a few words ago?

23 THE WITNESS: Agents, yeah.

24 MR. FREIDIN: I think he said it would be
25 subjected to some kind of agents, I didn't, it was the

1 adjective that he used.

2 MS. SWENARCHUK: Under high risk of many
3 agents.

4 MR. FREIDIN: Oh, of many agents maybe he
5 said.

6 THE WITNESS: Many agents, I'm sorry.

7 MADAM CHAIR: Thank you.

8 THE WITNESS: So therefore, we have
9 chosen 50 hectares. Now, I know you may have suggest
10 why exactly 50 hectares, why not 55 hectares, why not
11 45 hectares. And again, please, take these guidelines
12 or take these prescriptions as something which is not
13 carved in stone and...

14 MR. FREIDIN: Q. Have you ever managed a
15 poplar stand for poplar?

16 A. Yes.

17 Q. Where?

18 A. In Geraldton District.

19 Q. Which mill was the poplar going to,
20 do you remember?

21 A. It should go to Multi-Ply in Nipigon.

22 Q. Is that where it was going when you
23 were managing?

24 A. Yes.

25 Q. Which mill?

1 A. Nipigon Plywoods.

2 Q. And stands that you were getting the
3 poplar out of, were they mixed wood stands or were they
4 relatively pure poplar stands?

5 A. Patches were, some quite large areas
6 were pure poplar, some of it was mixed, it was very
7 difficult to describe these stands because there was
8 variation of density, there was variation -- it was
9 very good and very productive sites which produce good
10 poplar, and I thought that I would try to get poplar
11 back and perhaps you can see some of the prescription
12 here which are dealing, on some certain sites we should
13 get poplar back.

14 Q. Are you suggesting that the stands or
15 the poplar then which was harvested in the Nipigon area
16 that you are talking about and that you were involved
17 in, were pure stands of poplar or were they poplar
18 which formed part of the mixed wood stands?

19 A. Nearly pure poplar. It was poplar
20 working group.

21 Q. Poplar working group?

22 A. That's right.

23 Q. And this recommendation I think is to
24 apply to any stand which is in the poplar working
25 group?

1 A. That's right.

2 Q. And is there any other silvicultural
3 rationale for this limitation in clearcut size other
4 than what you have mentioned, and you've mentioned
5 frost damage and also you've talked about insect
6 disease?

7 A. Yeah.

8 Q. Anything else. I want to make sure I
9 know all the reasons that you're suggesting that that
10 is a reasonable silvicultural prescription. I don't
11 want to leave anything out.

12 A. I think this is all the main reasons.

13 Q. Well, those are the reasons that you
14 would put forward then in support of that proposition?

15 A. That is correct.

16 Q. All right. Okay, let's move to the
17 issue of full-tree logging which is referred to in
18 section 2.2, or term and condition 2.2.

19 A. Yes.

20 Q. In the second paragraph you make
21 reference to full-tree logging in hardwood stands?

22 A. Yes.

23 Q. For the purposes of interpreting this
24 term and condition, how do you define hardwood stands?

25 A. Well, hardwood stands in this case

1 mostly poplar and birch stands.

2 Q. Is it fair to say that poplar is
3 usually found on nutrient rich sites?

4 A. Correct, not always but many.

5 Q. Quite often?

6 A. Very often, yes.

7 Q. That being the case, why are you
8 recommending that on all such sites that you could only
9 harvest in the--

10 A. Leafless season, leafless.

11 Q. In the leafless season?

12 A. Yeah.

13 Q. I take it you want the leaves there
14 because of the nutrient contribution?

15 A. Yes, that is correct.

16 Q. And are you suggesting, sir, that the
17 contribution of nutrients by one year's supply of
18 leaves on a nutrient rich site is going to make a
19 significant enough difference that you should prohibit
20 the harvesting in the winter -- or pardon me,
21 harvesting in the summer?

22 A. In the summer. Well, I don't want to
23 get involved in discussion again which we discussed in
24 area of black spruce why we leaving the foliage on the
25 ground, and it has been discussed previously.

1 However, let me point out that in our
2 research we have done with Timmer and Savinsky and some
3 other, the hardwoods usually were higher in nutritional
4 capital than the softwoods.

5 Q. We have heard all of that evidence,
6 Mr. Marek.

7 A. Okay, then I am finished.

8 Q. But what I'm suggesting to you is
9 that you are proposing a rule that says you shall not
10 full-tree log a hardwood site in the summer, and the
11 rationale you've given to me is because of the loss of
12 nutrients--

13 A. Yes, that's correct.

14 Q. --that would be contributed in the
15 the leaves which would be on--

16 A. On the site.

17 Q. --the trees in the year of harvest?

18 A. Yeah.

19 Q. I'm suggesting to you that in the big
20 scheme of things the amount of nutrients that would be
21 contributed to by those leaves would be so
22 insignificant that to have a rule that says, you can't
23 harvest those in the summer, is not appropriate?

24 A. Yes, you can suggest it to me and I
25 will tell you that I don't disagree, however, let's...

1 Q. You don't disagree?

2 A. No, of course not, I disagree with
3 it.

4 Q. Or you do disagree?

5 A. You are telling me, you are
6 suggesting to me that there are nutrients and I will
7 suggest to you back that there are nutrients which can
8 be lost. So where are we? I think that...

9 If the managers, and let's be clear on
10 this, again, here comes the timber management plan
11 where the forest manager should stipulate one way or
12 the other if he cares or not to cares about leaves or
13 if he leaves them on the ground or harvesting in summer
14 or winter. I cannot do it here. What I am suggesting
15 in this prescription that perhaps we should give
16 consideration, and that's all I'm saying.

17 Now, what upsets me quite often that
18 people with no experience and no background suggest,
19 well what the hell that means, few nutrients. And that
20 is very simplistic forestry, sir, which I cannot buy.

21 Perhaps we don't know everything about
22 the nutrients in the foliage and the recycling and so,
23 but I may I suggest to you that I wouldn't take it very
24 lightly. Perhaps future going to show us who is right.

25 Q. You indicated that one should give

1 consideration to harvesting in the leafless season?

2 A. Yes.

3 Q. Are we to interpret this prescription
4 as not requiring it to be harvested in the leafless
5 season in all cases, but that is a matter which should
6 be considered and one could then decide to harvest
7 during the summer?

8 A. The FFT, the Forests for Tomorrow is
9 suggesting here that we should not be harvesting these
10 stands -- or we should be harvesting these stands in
11 certain time of the year, and I give you reason why,
12 it's the nutrients.

13 Sir, you feel otherwise or your customer
14 or your client feels different, I accept it, but I will
15 not fight the issue here, sir.

16 Q. All right. So we disagree on that
17 issue?

18 A. Of course we do, we disagree with
19 many thing.

20 Q. All right. Turn the page, page 4?

21 A. Yes.

22 Q. I note in subparagraph 2.3(a).

23 A. 2.3(a), yes.

24 Q. Where you talk about shallow soiled
25 sites?

1 A. Yes.

2 Q. You introduce a new phrase here, you
3 are talking about -- if you look down four lines, you
4 talk about,

5 "On these shallow soiled sites...", do
6 you see where I am?

7 A. "On these shallow soiled sites..."

8 Q. "No harvesting shall be permitted
9 unless the area can be naturally or
10 artificially regenerated to a stand at
11 least equal to or superior to the species
12 and density."

13 A. Yes.

14 Q. Now, we spent a lot of time on 1.1(a)
15 talking about returning the site to the species and
16 density, now you're saying returning it to the species
17 and density there originally or superior.

18 Why have you introduced this element of
19 superior species in 2.3(a) and you've done the same I
20 believe in 2.3(b)?

21 A. It seems to me that many of these
22 "shallow soiled sites", and again it's in quotation
23 marks, this is one of the problem we are having still
24 is identified properly these sites which have so many
25 adjective to it.

1 But in this case, may I point out to you,
2 sir, that quite frequently the original stands, fire
3 originated stands may be intermixed with jack pine and
4 it was my observation that jack pine on these extremely
5 shallow sites, and I'm talking about sites which is
6 just bare rock with patches, open bare rocks and
7 patches with some organic material, perhaps pocket of
8 soil here and there, would be better served if we
9 perpetuate black spruce and leave jack pine out.

10 Jack pine on these sites - and perhaps
11 that's a quirk of nature that this happen and I'm not
12 trying here to criticize the nature - however, it seems
13 to me that frequently the jack pine reach pathological
14 rotation very early because demands of jack pine on
15 certain nutrients like phosphorus, which has been very
16 well documented, and in that case I would rather see
17 black spruce on these sites wherever it is possible.

18 So, sir, this is main raison d'etre why
19 I'm saying maybe we can improve by establishing just
20 pure spruce instead of jack pine.

21 I don't know if you quite agree or if you
22 understand this processes, but from my experience, I
23 feel that perhaps possibility to improve on these
24 conditions.

25 Q. So just so I understand you then,

1 this section 2.3(a) should be looked at as an exception
2 to the general rule that you set in 1.1(a) and, that
3 is, that you should return the same species and
4 density.

5 A. That's why I said improve. That's
6 why I said that.

7 Q. So you can improve upon nature then
8 in this particular case by getting rid of the jack pine
9 which is there naturally and replace it with spruce?

10 A. Replace it with spruce.

11 Q. Is that what you meant by equal to or
12 superior to in the second one, 2.3(b)?

13 A. I have to look at it first.

14 Q. We are looking at sensitive sites
15 now.

16 A. You are talking about the paragraph
17 2.3(b).

18 Q. 2.3(b). If you look at it in the
19 fourth line, it says:

20 "No harvesting shall be permitted...",
21 right in the middle,

22 "No harvesting shall be permitted unless
23 the area can be naturally or artificially
24 regenerated to a stand at least equal to
25 or superior to the species and density in

1 the stand that is harvested."

2 Is the reason for having these words
3 appear any different than what you told me in relation
4 to paragraph 2.3(a)?

5 A. Yeah, we talk about here two terms,
6 we talk about species and density and, again, I have to
7 go back to density because density is very important
8 part of the recovery of the ecosystem itself.

9 Q. Mr. Marek --

10 A. I have to go back.

11 Q. Mr. Marek, does the term superior --
12 let's go back to 2.3(a) then. Does that refer to
13 superior in terms of species, it's means that because
14 you said you want to replace jack pine with spruce?

15 A. No, that means -- superior is
16 general. You can improve density, you can improve in
17 specie composition, you can do all kind of things.
18 And, again, this is the kind of forestry which I feel
19 is important, where nature give us fairly well
20 guidelines we still can improve on nature in many
21 instances, and this is one of these things which...

22 Q. My question though is, in 2.3(a) you
23 said that superior included this concept of putting
24 back a superior species; i.e., getting rid of the jack
25 pine?

1 A. No, no, superior -- did I say specie?

2 Q. Well, you talked about -- it says
3 species which --

4 A. Well, in certain instance, yes.
5 Sir --

6 Q. In that instance?

7 A. In the other instances which we
8 discussed. Previously I was talking about jack pine
9 which perhaps shouldn't be there, we could put more
10 black spruce. In this case I am talking about better
11 density, I am talking about the stocking of stands, and
12 I am talking in general ecosystem which I think could
13 be improved upon.

14 Q. All right. So is there any concept
15 or contemplation of putting back a species different
16 than the ones which were there by nature when you are
17 talking about superior in term and condition 2.3(b)?

18 A. I just said, I just stated to you
19 that superior in this case mean density; in previous
20 case it was the species, so...

21 Q. Does it include species in 2.3(b),
22 Mr. Marek?

23 A. Look it, you are forcing me to make
24 general statement on very many condition and sites
25 which I right now haven't got in front of me.

1 So let's me more specific. In this case
2 I am talking about improvement of general system; in
3 other words, I am talking about better stocking, better
4 crown density, earlier stocking or earlier crown
5 closure in order to improve the site for better
6 production. That is all I can tell you.

7 Q. In the last sentence of 2.3(b) it
8 says -- we are talking about sensitive sites?

9 A. Yes.

10 Q. "Where harvesting may be carried out
11 on a sensitive site, only conventional
12 bole harvesting methods shall be
13 utilized."

14 A. Yes. In other words, we want to
15 leave the foliage and nutrient capital on the site.

16 Q. I understand that. And if you look
17 at the definition of sensitive sites in that same
18 paragraph, you talk about--

19 A. Yes.

20 Q. --areas which are identified as being
21 sensitive to the impacts of harvesting by reason of
22 nutritional status?

23 A. Yes.

24 Q. I take it that's the reason that you
25 referred or make this condition about conventional bole

1 harvesting only?

2 A. That's right.

3 Q. Is that right?

4 A. That's right.

5 Q. Now, sensitive sites according to the
6 definition -- pardon me, according to this paragraph.

7 A. Yes.

8 Q. Can be -- or sites can be identified
9 as sensitive for reasons other than nutritional status.

10 Do you see that?

11 A. Yes.

12 Q. Slope, soil depth, soil type and
13 texture, or drainage.

14 A. Yes, stocking.

15 Q. My question is: Other than
16 nutritional status, what is the connection between
17 full-tree harvesting and these other factors which
18 could cause an area to be sensitive?

19 A. Yes.

20 Q. I don't understand the connection.

21 A. You will not understand because
22 that's why I am drawing this beautiful picture for you.

23 Q. Thank you.

24 A. This is a bedrock, bedrock, bedrock,
25 bedrock. You have trees growing here, this of course

1 is empty place for bedrock very, very unstable. Okay.

2 Sir, if you going to harvest -- in case
3 you going to harvest the tree, in case you do - I
4 wouldn't harvest it, I will leave it standing - but in
5 case you have this open bedrock areas by felling trees
6 in direction of the bedrock, covering it by slash, you
7 are contributing to the rehabilitation of that bedrock
8 into the kind of productive place.

9 That's why I'm prescribing leaving the
10 slash on the ground because we got to start someplace,
11 and if you leave -- if you take off the slash you
12 obviously are not only denuding this bare rock here but
13 also the area around it and so on.

14 There are books written on it, sir, about
15 this rehabilitation of some of the very shallow sites.

16 Q. And by rehabilitation in that
17 context, are you talking about regeneration?

18 A. We are talking about eventual
19 regeneration, because once you have something else but
20 the bedrock, which you cannot grow trees - perhaps you
21 see that - we can establish media where tree can grow
22 and eventually a forest.

23 Q. And that would be another example of
24 what you would describe as improvement over nature?

25 A. I think so. Madam Chair, to liven up

1 this discussion, I can tell you exactly Europeans are
2 carrying buckets of soil on some of these bare rocks to
3 stabilize that or improve the condition and plant the
4 trees on it eventually, because some of these
5 devastation which were done in Europe, certainly in
6 southern Europe in countries like Yugoslavia, Romania
7 and so, the devastation of clearcutting and follow-up
8 burning exposed so much bedrock that these sites now
9 being rehabilitated by carrying baskets of soil to
10 these sites in order to establish forests again.

11 And I don't think it's going to happen in
12 Canada, but it's happened throughout the world, and the
13 tremendous cost, tremendous cost. You can imagine
14 carrying basket of soil up the hills which were -- I
15 understand something similar is happening in Nepal and
16 in some of these areas which were heavily deforested
17 and some of it was burned later on and...

18 Q. Would you turn to page 5, please.

19 A. Of what?

20 Q. Forests for Tomorrow, Exhibit 1416A.

21 A. Page 5?

22 Q. Yes. Where you have terms and
23 conditions in relation to prescribed burning.

24 A. Are you still talking about the FFT?

25 Q. Yes.

1 A. Page 5, yeah.

2 MS. SWENARCHUK: 4.1?

3 THE WITNESS: 4.1, yes, the prescribed
4 burning.

5 MR. FREIDIN: Q. Yes, 4.1.

6 A. Okay.

7 Q. When you gave your evidence about
8 prescribed burns you mentioned the prescribed burn area
9 being dry with no rain similar to what you would get
10 after a wild fire?

11 A. That is correct.

12 Q. What was the point that you were
13 making? Why is that an important or significant
14 observation?

15 A. Oh, because that's a very important
16 factor. Sir, if you have a dry burned-over area,
17 feathermosses especially dries out very quickly of
18 course. The other thing that rain always is full of
19 nutrients, we know that, and if the area is moist and
20 wet and some time in fact saturated, you have a
21 completely different germination media, you have a
22 completely different microsite, you have something
23 where for while at least seed or trees can strive upon
24 or...

25 Q. Do you agree, sir, that large fires

1 in northern Ontario during the dry season are often
2 followed with no rain for weeks or even months? You
3 get wild fire and you don't get rain for weeks or
4 sometimes even months.

5 A. Who puts out that fire?

6 Q. Well, the rain will put it out
7 eventually, but sometimes the rain doesn't come for
8 weeks.

9 A. After fire is finished. No, there is
10 something fishy here. What are you talking about?

11 I have studied wild fire in northern
12 Ontario, not only northern Ontario other places too,
13 and I am very much aware of the fact that most of the
14 large wild fire - and he's talking about large wild
15 fire - that usually it's raining heavy, heavy rains
16 which put out the water. The activity of MNR is
17 probably limited to these hot spots here and there, or
18 fire which went into the ground and keep smoking,
19 patches and so on. But, in general, the heavy rains
20 are the main factor to extinguish wild fire.

21 Q. So just so I understand your
22 evidence, your evidence would be then that you get
23 longer periods of no rain after a prescribed burn, much
24 longer than you would after most wild fires?

25 A. That's a relative thing. I mean, you

1 talk about longer period. In many wild fire -- in many
2 prescribed burn, then condition got to be such that
3 after the fire is finished that you may or may not get
4 the fire -- pardon me, rain. And I don't know the
5 percentages out of my heard, but it seems to me when I
6 ask the federal government about some of these
7 statistics, which were very important to me, for
8 instance, how much fires we have with such and such
9 condition after, they didn't have the answer, and I say
10 it's a very important factor.

11 Q. Thank you. I have your evidence on
12 that. As I read this term and condition it makes
13 scarification mandatory after prescribed burns. Is my
14 interpretation correct?

15 A. No, not at all. Where is that
16 written?

17 Q. Well, it was amended and it says, as
18 amended:

19 "Where a prescribed burn is conducted
20 scarification shall be conducted on the
21 burned areas to achieve biological
22 reactivation of the humus upper stratas."

23 I read that as a requirement that after
24 prescribed burn scarification is mandatory?

25 A. In many instances it is, yes.

1 Q. So in some cases it's not required?

2 A. Well, if the fire went right down to
3 the mineral soil, of course, you don't have to have
4 site preparation; but if you have, if you have still
5 and that's most the time what's happened, that after
6 prescribed burning you have still desiccated
7 feathermosses, dark surfaces and just reduced to the
8 depth, so you will have to prepare new microsites and
9 new activities, and that's only down when you mixing
10 that residue of this burn with mineral which is much
11 moisture, as you know.

12 Q. I understand. So I take it then you
13 would have no disagreement to the words of 4.1 being
14 changed, and they would reflect your view if it said:

15 "Where a prescribed burn is conducted,
16 scarification should be conducted on
17 burned sites where biological
18 reactivation of the humus upper strata
19 is required."

20 A. Again, it's very specific, it's very
21 site-specific.

22 Q. All right. So if it's site-specific,
23 we shouldn't have a rule that says you must always, we
24 shouldn't interpret this as being a requirement that
25 you must always site prepare after prescribed burning,

1 your intent is to say do it where it's necessary?

2 A. That's right.

3 MR. FREIDIN: Are we going have an
4 afternoon break, Madam Chair. How do you want to deal
5 with this?

6 MADAM CHAIR: Would you like a break, Mr.
7 Marek?

8 THE WITNESS: No, no, I can go. It's no
9 problem for me.

10 MADAM CHAIR: Will you be finished by
11 four, Mr. Freidin?

12 MR. FREIDIN: No.

13 MADAM CHAIR: How much longer will you
14 be?

15 MR. FREIDIN: Oh, another two, three
16 hours.

17 MADAM CHAIR: Ms. Swenarchuk, do you see
18 any point in sitting later this evening?

19 MS. SWENARCHUK: No, Madam Chair. I'm
20 ready to commence re-examination at any time.

21 MADAM CHAIR: Why don't we take a
22 15-break now then and finish off close to four.

23 ---Recess taken at 2:55 p.m.

24 ---On resuming at 3:15 p.m.

25 MADAM CHAIR: Please be seated.

1 Mr. Freidin?

2 MR. FREIDIN: Q. Can we move on to a
3 new, somewhat new topic. For the moment you can put
4 those Forests for Tomorrow terms and conditions aside.

5 A. It's wore out.

6 Q. That's good.

7 A. It's going to be in shreds.

8 Q. And I'm worn out asking you about
9 them.

10 A. Okay.

11 MR. MARTEL: Well, you can stop.

12 MR. FREIDIN: I know, I know.

13 THE WITNESS: Can I depend on it. Can I
14 put it over here?

15 MR. FREIDIN: Maybe we'll use it later,
16 but just set it aside. You may not need the
17 photograph, but when you gave evidence in relation to
18 photograph No. 13 you made the comment that there was
19 nice moving water. I don't know what --

20 A. Oh. Nice moving water.

21 Q. Ms. Swenarchuk will give you a copy
22 of the photographs. And this is a picture of an upland
23 site, 13, is it?

24 A. No, this is transition.

25 Q. Oh, the transition.

1 A. Madam Chair, I said it, I testified
2 to it, it's upland in the back, some chop up in the
3 right, and there is a transition site goes into the
4 drainage, drainage.

5 Q. I got you.

6 A. I didn't say -- drainage.

7 Q. Okay. And what did you mean when you
8 said there was nicely moving water, what was the --

9 A. I didn't say nicely. Did I say
10 nicely?

11 Q. Yes, you said nicely moving water.

12 MS. SWENARCHUK: Maybe you could read the
13 transcript and give him the context. It's
14 approximately a month ago.

15 MR. FREIDIN: All right. Well, I will
16 defer that because I don't have the actual transcript
17 reference.

18 THE WITNESS: Okay. I don't want to
19 argue. It's a drainage which follow this transition
20 sites and goes into the -- probably this goes into
21 Sturgeon River, if I'm not mistaken, but I just -- nice
22 moving water.

23 MR. FREIDIN: Q. Is there any --

24 A. Okay.

25 Q. Is there any reason that water is --

1 you said nicely moving water. All right, let's put it
2 this way. Is there a difference between stagnant water
3 and water which is moving when you are talking about
4 productivity of a site?

5 A. Of course, of course. Upland has
6 oxygen; other one hasn't got it's. Okay.

7 Q. You also made mention of telluric
8 water in your evidence. What is that?

9 A. Telluric water. Madam Chair, I will
10 draw a picture of telluric water.

11 Here is bedrock, here is organic material
12 over the bedrock or soil over bedrock, precipitation
13 come, telluric water slides down with the gravity to
14 the drainages which may be here, is this okay. That's
15 telluric water, moving down.

16 Q. And does the telluric water provide
17 any nutrients to tree species which would be on the
18 slope?

19 A. Matter of fact the best, the
20 transition site which are, say trees are growing here,
21 this is probably the most productive site you can have.

22 Q. All right. And on those bedrock
23 sites that we have talked about that -- on some of
24 those sites, the trees then in the transition area
25 receive nutrients from precipitation?

1 A. Nutrients moving down.

2 Q. In the water?

3 A. Moving.

4 Q. In the water, in the rain water?

5 A. Yeah, water which slides down the
6 hill.

7 Q. Okay, thank you. You made a comment,
8 and again if you need the reference I will undertake to
9 try to find it, but my notes indicate that you
10 indicated that after full-tree harvesting and large
11 clearcuts there may be an effect on water table?

12 A. Yes.

13 Q. Now, I understand your evidence about
14 why a large clearcut affects water table, but I don't
15 understand what difference it makes as to whether that
16 clearcut was full-tree or bole-only in terms of water
17 table now.

18 A. Oh, yeah. Well, that is just one
19 part of it. I mean, there are many, many factors of
20 water movements in the ecosystem. However, you have
21 chosen specifically the effect of slash on water table.

22 Q. On water table.

23 A. Yeah, okay. Let me point out, sir,
24 that, say, this is the slash, tree tops, slash, over
25 the soil, rainfall goes, the slash intercept, intercept

1 the rainfall, it keep it for certain period of time,
2 then of course there is two movements; one,
3 transpiration up; percolation down into the soil, you
4 understand?

5 Q. I understand. And without it there
6 there is nothing to stop it and it all goes into the
7 soil?

8 A. Exactly.

9 Q. Thank you.

10 A. Both ways too, up and down.

11 Q. Up and down, all right. We are just
12 moving along here. Maybe we can just whip right
13 through all this.

14 A. Maybe we will be friends after all.

15 MADAM CHAIR: Are you going to shake Mr.
16 Freidin's hand when it's all over, Mr. Marek?

17 THE WITNESS: I will. I do it with
18 everybody, why not with him.

19 MR. FREIDIN: Well, you're sure to make a
20 point if you didn't.

21 MS. SWENARCHUK: We will watch.

22 MR. FREIDIN: Q. We talked about water
23 table rise after harvesting.

24 A. Right.

25 Q. And is the reason that that occurs

1 because the trees are gone and, therefore, they don't
2 act as a pump any longer?

3 A. No. 1.

4 Q. That is No. 1?

5 A. No. 1. There are several aspects to
6 it.

7 Q. But in terms of dealing with any
8 precipitation which comes to the site --

9 A. Evapotranspiration process are
10 interrupted because you remove the pumps, that's
11 correct.

12 Q. Okay. And when a wild fire goes
13 through and kills the trees, do the trees cease acting
14 as pumps as well?

15 A. To some degree.

16 Q. Does vegetation on the site, lesser
17 vegetation act as pumps as well as trees?

18 A. That's correct. Any living thing is
19 a means of evapotranspiration or part of the
20 evapotranspiration process.

21 Q. In relation to this issue of water
22 table rise, you make a comment on page 24 of your
23 witness statement.

24 A. Yes.

25 Q. This is Exhibit 1514, this is Forests

1 for Tomorrow's witness statement at page 24 where you
2 talk about--

3 A. Yes.

4 Q. Page 24.

5 A. Yes, I have page 24.

6 Q. Yes. I'm just waiting for the Board
7 to get their copy.

8 A. Oh, I see.

9 Q. You make reference to the 1989 report
10 of Haavisto, Groot and Jeglum in the middle of the page
11 where you indicated that they first documented evidence
12 for water level rises in peat land forest types in
13 Ontario?

14 A. That's correct.

15 Q. Following harvesting.

16 A. Following harvesting.

17 Q. And I just want to ask you a couple
18 of questions about that article which you'll find in
19 your source book.

20 A. Right.

21 MR. FREIDIN: I'm assuming it should be
22 source book 1, Ms. Swenarchuk?

23 Q. It's actually -- it's under, it
24 should be under "H" for Haavisto?

25 A. Haavisto, yeah.

1 MS. SWENARCHUK: That is in No. 2.

2 MR. FREIDIN: It may have been filed
3 under MacIver actually, in fact I think it is under
4 MacIver.

5 MS. SWENARCHUK: It's filed under
6 Haavisto, but it's in source book 2.

7 MR. FREIDIN: We had some trouble finding
8 it. We believe it's in your source book, Madam Chair,
9 under MacIver, under "M", if you can't find it under
10 "H".

11 MS. SWENARCHUK: It's in my source book
12 under 2.

13 MR. FREIDIN: I know, but we went up to
14 the Board and we couldn't find it. We went to the
15 Board and asked Mr. Pascoe.

16 MADAM CHAIR: Oh yes, I see it, it is
17 under MacIver in our index.

18 MR. FREIDIN: Thank you, Mr. Pascoe.

19 Q. In terms of conifer species, Mr.
20 Marek, is black spruce a species which can be described
21 as being most tolerant of poor aeration?

22 A. Of poor aeration. You are trying to
23 tell me the tolerance, "tolerance" is.

24 Q. Yes.

25 A. Yeah, the black spruce can take quite

1 a variety of condition from extreme, that is why we
2 have it spread all across the boreal forest, yeah.

3 Q. Extreme in terms of the amount --

4 A. Not in the tolerant of shading or
5 anything, but tolerant in accepting, accepting site
6 conditions which are and it can tolerate and grow.
7 So there is a difference in tolerance.

8 That's two different terms with two
9 different meanings and it's in quote "tolerant".

10 Q. Would you turn to page 152 of this
11 article.

12 A. Yes.

13 Q. There's a heading on the left-hand
14 side, Water Levels in Peat Lands?

15 A. Yes.

16 Q. And these authors were looking at an
17 area in the Clay Belt I believe; is that correct?

18 A. That's right. There was 26 wells
19 established in 1962 there and I am aware of some of
20 these wells.

21 Q. Okay. In the first few lines under
22 the heading, Water Levels in Peat Lands the authors
23 say:

24 "High water levels are a feature of all
25 peat lands."

1 A. Yes.

2 Q. "In forested swamps the water level
3 may be visible in small pools or channels
4 for part of the year but will never be
5 very far below the site surface."

6 A. Correct.

7 Q. Is that a statement that you agree
8 with?

9 A. Yes.

10 Q. And you agree then, therefore, that
11 if you go into a black spruce stand in a lowland the
12 fact there may be visible water; i.e., water at the
13 surface, may very well be a natural condition?

14 A. Yes.

15 Q. Would you agree with me that these
16 authors did not make any comment as to whether the
17 water level changes referred to or observed here
18 affected growth in the three stands?

19 A. No, they didn't. That was not the
20 purpose of the study, that study purpose was strictly
21 to monitor rise and fall of the water levels--

22 Q. Okay.

23 A. --in the wells established.

24 Q. What is the rooting depth of black
25 spruce.

1 A. Minimal.

2 Q. And in terms of depth, can you give
3 us any indication in terms of centimetres?

4 A. Madam, I dealt with it in the first
5 few slides.

6 Q. I just don't remember what it was
7 though.

8 A. Take a look at the first slides, sir.

9 Q. It's the dimensions that I'm
10 interested in, the depth.

11 A. Well, that is -- I have dealt with
12 it, but I going to repeat it again.

13 Q. I know you gave the evidence about
14 how they are shallow and how they move laterally and
15 all those sorts of things.

16 A. No, no. You have a tree a relative
17 age and the root system usually in this horizon between
18 L and F. So you are talking about, oh, total of these
19 plates of black spruce, in mature black spruce be eight
20 inches, total root system. In young seedlings it's
21 probably few millimetres from the --

22 Q. Is it eight inches laterally or eight
23 inches deep?

24 A. You talking about?

25 Q. Deep.

1 A. Deep.

2 Q. All right.

3 A. Vertically.

4 Q. Okay. So would you agree with me
5 when we look at figure No. 3w hich is on page 152--

6 A. Yes.

7 Q. --that we have the water level
8 fluctuation for the three wells that are reported in
9 the study?

10 A. Yes, yes.

11 Q. And the little circle with the dot in
12 the middle--

13 A. Yes.

14 Q. --is the level of the water table at
15 the time of the harvest?

16 A. Date, post removal, correct.

17 Q. All right. So we have three little
18 dots there?

19 A. Yes.

20 Q. Indicating three different water
21 levels because we're looking at three different sites?

22 A. Yes, yes.

23 Q. Would you agree with me that if we
24 look at this, that with the wells No. 3 and 4, which
25 are the two bottom ones--

1 A. Yes.

2 Q. --that with the water rise -- or the
3 rise in the water table--

4 A. Yes.

5 Q. --that there is still adequate
6 rooting depth for regeneration of black spruce in those
7 two cut-overs?

8 A. No, I cannot agree with that because
9 that's where the damage occur. No, simply no.

10 Q. Could you explain what you mean when
11 you say that is not where the damage occurs.

12 A. The damage occurs -- I don't want
13 to -- Madam Chair, here is a little seedling, it just
14 germinated and have a root system as pointed out in the
15 photograph No. 1, we are dealing with relative depth,
16 only few millimetres where this little seedling can
17 derive their nutritional needs.

18 If that rise of water table - this is a
19 normal water table - if that rise just increase a few
20 millimetres immediately these roots of that seedling
21 get flooded. While damage may not occur in day or two,
22 but if this flooding may last longer period of time, of
23 course this seedling may suffer damage by, No. 1, lack
24 of oxygen, high acidity and whole variation of other
25 aspects of other factors which are not favourable to

1 the seedlings establishment for growth.

2 Q. You gave that evidence before. I am
3 just trying to interpret--

4 A. Yes.

5 Q. --this particular graph. That in the
6 check wells that are reported here, the water table is
7 below the level at which those young seedlings would be
8 putting out roots?

9 A. Your statement, it's not my
10 statement.

11 Q. I'm just asking if you can help me as
12 to whether I'm interpreting this graph. No, not the
13 general theory, the graph, the results on this study?

14 A. Oh.

15 Q. As I see it we have got a water
16 table--

17 A. Yes.

18 Q. --in well No. 4--

19 A. Yes.

20 Q. --which at the time of harvest was
21 about 12 or 13 centimetres below grade?

22 A. Yes.

23 Q. And if we go to the second well, No.
24 3, it was about 17 or 18 centimetres below grade, and
25 if we go to well No. 3, it was down around 40 or 42

1 centimetres below the surface. Do I interpret that
2 correctly?

3 A. No, you are not.

4 Q. Well, doesn't the little round dot or
5 the round circle with the dot in the middle indicate
6 the level of the water table at date of harvest?

7 A. Yes, date of stand removal; in other
8 words, they measure it over there. But look at the
9 graphs above it, this fluctuation of water which went
10 up, way up to -- look at the last one here.

11 Q. I'm just talking about at the date of
12 harvest, Mr. Marek.

13 A. Yes, I know that.

14 Q. But what is -- All right. It
15 fluctuated, I know it fluctuated and it fluctuated over
16 four years, that's what the graph shows.

17 A. Exactly.

18 Q. I'm saying at the date of harvest
19 would you agree with me, even in the year of harvest
20 then that the fluctuation -- you didn't end up with a
21 water table rise which would get up to the level where
22 you would have roots being put out by a seedling?

23 A. Of course it does because the
24 seedlings are below that. If the water level rises,
25 the root system get flooded, and you can see it on

1 these fluctuation here, so...

2 Q. Mr. Marek.

3 A. Yes.

4 Q. When you have a seedling.

5 A. Yes.

6 Q. And it's established in its first
7 week or two weeks, and in the first year how deep from
8 the surface will the seedling's roots go?

9 A. Here, I am showing to you.

10 Q. Right at the surface. You said it's
11 eight centimetres -- pardon me, eight inches for a
12 mature black spruce?

13 A. Yes.

14 Q. How deep below the surface do you get
15 little -- your initial root system for a one-year-old
16 black spruce seedling, how deep?

17 A. Here is the depth between L and F
18 layer and if that F gets flooded here, immediately
19 cause the damage to the root system.

20 Q. Are you able to read this graph, Mr.
21 Marek?

22 A. Yes, I look at it many times.

23 Q. What is the level of the water table
24 in relation to the surface for well No. 2 at the time
25 of harvest?

1 A. Will you come again?

2 Q. What is the level of -- all right.

3 What is the depth to water level from the surface for
4 well No. 2 at the date of harvest?

5 A. You got it right there, that circle,
6 and look at that circle where it is.

7 Q. All right. And how many centimetres
8 below the surface is that water table?

9 A. Water table is 15, which probably
10 someplace here.

11 Q. You said 15. Okay. What is the --
12 let's try it this way. What is the level of the water
13 table from the surface for well No. 3?

14 A. Here you go, well No. 3.

15 Q. At the date --

16 A. It's dotted, it's dotted, and you can
17 see that the circle is right on the top of the graph.

18 Q. How many centimetres from the
19 surface?

20 A. It's 15, probably around 17
21 centimetres.

22 Q. Okay. And if you go down to well No.
23 3 it's down about 42 centimetres -- well No. 4, I'm
24 sorry.

25 A. Yeah, yeah, considering this is a

1 mature stand.

2 Q. And would you agree with me -- these
3 were mature stands which were harvested; weren't they?

4 A. That's right.

5 Q. Would you agree with me that in all
6 cases the level of the water table; i.e., the depth to
7 the water level from the surface at the time of harvest
8 in all three wells was below the rooting depth of a
9 black spruce seedling which was one year of age?

10 A. Correct.

11 Q. Is it below the water table--

12 A. After year or two or three?

13 Q. Yes.

14 A. Okay. No, because you can see the
15 graph fluctuating up.

16 Q. Right. And if you look over here
17 where, for instance in the fourth year particularly
18 where we get a fluctuation --

19 A. Way up there.

20 Q. Right. And I would suggest to you
21 that that's only in the case of one well.

22 A. But, sir, look at the recommendation
23 of the report. I think we can spend a day just talking
24 about graphs, No. 1, which is expressed very well in
25 the final recommendation of the report.

1 Q. Well, Mr. Marek, I think I have spent
2 enough time with you on this. I prefer to look at the
3 graphs which are the actual results.

4 A. Fine.

5 Q. And I think we have done that.

6 A. Okay, okay. Keep going.

7 Q. Let's go to the summary. To be fair
8 to you.

9 A. Yes.

10 Q. Is that what you want to refer to
11 where the summary is where they make their conclusions?

12 A. Yes.

13 Q. And I take it -- which part of that
14 do you want to refer to, Mr. Marek?

15 A. No, I don't want to refer to
16 anything, matter of fact I have presented my case very
17 clearly, Madam, what water does, what water -- how
18 water fluctuates and how damage -- what damage could be
19 done by saturation of water for certain time to the
20 black spruce ecosystem, to the black spruce root system
21 and...

22 Q. That's fine, let's move on. I'm
23 going to be very agreeable this afternoon.

24 Let's go to your discussion about uplands
25 and lowlands. You made a comment when we were talking

1 before about the transition and the drainageways?

2 A. Right.

3 Q. I take it when you gave that evidence
4 just a few moment ago you were talking about what you
5 referred to as patterned sites or pattern sites?

6 A. Pattern site is different site all
7 together. Pattern sites are combination of shallow and
8 drainages. Pattern site is something like this, it's a
9 pattern.

10 In other words, there are several,
11 several patterns condition which go from upland to
12 drainage, upland -- dry sites, wet sites, dry sites,
13 wet sites, and that may be in the distance of from
14 hundred metres to 10 metres.

15 Q. Is that the sort of condition which
16 you --

17 A. That's a pattern site.

18 Q. Right. And is that the sort of site
19 that is common in the Lake Nipigon area?

20 A. That's correct, it's common
21 everywhere.

22 Q. And is that the kind of site that
23 we've talked about a lot which would accurately
24 describe some of your -- or many, if not most, of your
25 shallow till over bedrock sites?

1 A. No, not necessary. These are one of
2 these sites.

3 Q. One of those?

4 A. Pattern.

5 Q. One of those shallow till sites is
6 the pattern site?

7 A. Yeah.

8 Q. Okay. And when you are talking about
9 those pattern sites in the Lake Nipigon area, are those
10 areas which are described as upland sites?

11 A. No. This is upland, this maybe
12 drainage lowlands.

13 Q. Okay. So on those pattern sites the
14 uplands would be the bedrock?

15 A. Ridges.

16 Q. Then you have the transition where it
17 gets more moist, and then in the bottom --

18 A. No, no. Well, if you call it again
19 "transition", transition site are these sites what you
20 saw -- it's a larger transition which may spread from
21 oh, up to one kilometre in the land. Here you are
22 talking about very minute.

23 Q. The drainageways are called lowlands?

24 A. This is organic lowlands.

25 Q. All right. So you can have on these

1 pattern sites then dry upland and more moist wetlands?

2 A. There is a multitude of microsites
3 here which may vary from very dry to very wet.

4 Q. Okay. Would you refer to page 40 of
5 the witness statement, please.

6 A. Yes, yes.

7 Q. A number of people, including the
8 Board, have asked you questions about the first
9 paragraph where you make this reference to the
10 percentage of 20 and 50 per cent?

11 A. Yes, a percentage between 20 and 50
12 per cent of area. Damages vary depending upon
13 topography, layout, site condition, yes.

14 Q. Right. And you are talking in this
15 paragraph, at least in part, about sites where you've
16 got bedrock?

17 A. Yes, here.

18 Q. I am just wondering, is this
19 paragraph then and this percentage then a reference to
20 these pattern sites?

21 A. Not only that, these are the sites
22 where you can even go over 50 per cent damage because
23 by skidding usually completely destroy these
24 microsites, you erode lots of these surface material at
25 the top of these little ridges. So you talking about

1 substantial damage to these sites by logging, even more
2 than 50 per cent, sir.

3 Q. How much? Well, never mind.

4 A. Oh, thank you for that, sir, because
5 I couldn't answer it.

6 Q. What percentage of these pattern
7 sites would be made up of the lowlands drainageways as
8 opposed to the upland portions?

9 A. Now, are you talking this case these
10 patterns.

11 Q. The pattern sites, yes.

12 A. Okay, what percentage. Oh, I think
13 it's equal. Usually this is 50 per cent, this is 50
14 per cent, maybe half and half, so you have 50 per cent
15 perched up higher ground, and 50 per cent the lower
16 ground, you can see here.

17 Q. And would it be fair for me to assume
18 that many of the pictures of the rutting that you
19 showed--

20 A. Yes.

21 Q. --were in fact rutting of the
22 lowlands portion of those pattern sites?

23 A. Yes, yes. Right here.

24 Q. And would you agree with me that if
25 in fact we take your figures of 50 per cent of those

1 pattern sites. 50 per cent being upland and 50 per
2 cent being the more moist lowlands--

3 A. That's right.

4 Q. --that if you damaged every square--

5 A. Yes.

6 Q. --of the lowland portion of those
7 pattern sites, you would damage 50 per cent according
8 to your numbers?

9 A. Well, this again 50/50 per cent, this
10 is one part. If you talk about the damage on --

11 Q. No, no, I'm talking about damage from
12 rutting that you showed in your pictures.

13 A. Damage rutting occurs here hundred
14 per cent.

15 Q. In the lowlands. And I'm saying, in
16 terms of those sites, if you had a harvest block--

17 A. Yes.

18 Q. --which encompassed a pattern site--

19 A. That's right.

20 Q. --that the amount, based on your
21 50/50 division, the maximum amount of the site which
22 would be susceptible to rutting would be 50 per cent of
23 the site?

24 A. In these lowlands.

25 Q. Yes, the maximum susceptible, I mean

1 if it ran over every single inche of it you would rut
2 50 per cent of the site?

3 A. That's correct.

4 Q. So when you say on page 40 that the
5 percentage may vary between 20 and 50 per cent and you
6 are talking about rutting, if we are talking about
7 rutting, we would be talking about you would be causing
8 20 to 50 per cent of 50 per cent of the site?

9 A. I don't know if I have to
10 specifically recall -- the percentage between 20 and 50
11 per cent of areas damaged, I am talking about area.

12 "Area damaged this way may vary depending
13 on topography, layout, site condition."

14 This is true, this statement can be taken
15 as the total damage to the site may be between and 20
16 and 50. If you have more of these lowlands, you can
17 have probably more.

18 Q. To be fair to you, Mr. Marek, in this
19 paragraph--

20 A. Yes.

21 Q. --on page 40 are you talking about --
22 when you're talking about damage 20 to 50 per cent, you
23 say damaged this way, are you talking about damage
24 about rutting only, or are you talking about other
25 kinds of damage as well?

1 A. There is erosion, there is rutting,
2 there is exposure to bedrock; in other words, these
3 area can be exposed bedrock may be wide enough to be
4 more exposed, in other words, by erosion of this
5 material from the top down, down into the low lying
6 areas.

7 Q. All right. So when we read this
8 reference to the percentage between 20 and 50 per cent
9 of the areas being damaged this way--

10 A. Yes.

11 Q. --you're not referring only to damage
12 through rutting?

13 A. I am talking, taking this site out of
14 production.

15 Q. For reasons?

16 A. Out of production.

17 Q. Because of rutting and other reasons?

18 A. And other reasons, there are many.

19 Q. I just wanted to understand the
20 significance of your --

21 A. Okay, fine.

22 Q. All right. And you've helped in that
23 regard. Thank you. Could you look at your
24 photographs, please.

25 A. Yes, I have to go back to my...

1 Q. Will you turn to photograph 45,
2 please.

3 A. Yes.

4 Q. Is that the picture of a landing or a
5 portion of the skidway right next to the landing?

6 A. This is a picture into the strips
7 from, I would say, 200 feet from the main road. In
8 other words, main road is in front of us, I walk and
9 took the picture inside of the strip and the damage
10 done by the wide-tired skidders or wide flotation
11 equipment. So it goes into strips, it's beginning of
12 the strips.

13 Q. Okay, thank you. I think you also
14 made a comment in relation to slide 53--

15 A. Yes.

16 Q. --that the area of rutting could have
17 been avoided by taking the long way around?

18 A. Well, Madam Chair, I have described
19 the possibility of avoiding these damages and, as I
20 suggested to you, you can take a part of these area and
21 travel on it perpetually; in other words, as long as
22 the timber is in the strips you travel one way, return,
23 and damaging thus just a certain part of the area.

24 This has been done right across the
25 board; in other words, any time the skidder went in to

1 pick up the wood, he just travelled, you know, right
2 across the piece of the strip.

3 Q. Would you agree with me that there's
4 less flexibility in strips to avoid going over these
5 lowland areas than would be the case in a larger
6 clearcut?

7 A. Well, less flexibility. Less
8 flexibility if you want to travel the shortest route,
9 right. In other words, you decide that from A to B is
10 200 metres or 200 feet, and you take that route every
11 time, you go back and forth or you go around it, of
12 course, you going to travel longer distance or you may
13 not travel longer distance, but you may have some other
14 difficulty.

15 Q. Right. But if you're willing to go a
16 longer distance, there would be more options open to
17 you to go a different distance and avoid these
18 susceptible areas, if you were in an open clearcut as
19 opposed to being in a strip?

20 A. Well, the restriction of standing
21 timber is there, of course, you cannot travel across
22 the face of the standing timber, of course.

23 Q. Thank you.

24 A. That would be pretty disastrous.

25 Q. Thank you.

1 A. And I don't know if you can achieve
2 it. You could do it I suppose, it has been done, I
3 have seen many times that they took the short route and
4 channelling the wood directly through the standing
5 strip, you know, just make a channel through it to get
6 to the road.

7 That has been done and perhaps there is
8 some answer to it too, because perhaps it's more
9 beneficial to destroy just the one, you know, certain
10 swatch through the standing timber than travelling
11 across the whole field in this manner.

12 Q. Mr. Marek, I am going to move on to
13 another area. You indicated in your evidence that you
14 felt it was important that there be liaison between the
15 scientific community and the field forester; is that
16 correct?

17 A. Very much so.

18 Q. And were the technology development
19 units in existence at the time that you were with the
20 Ministry of Natural Resources? I don't believe they
21 were.

22 A. No, it was already developed. I
23 think it started way back end of 70s where we have
24 some -- I don't know what the name it was, but the MNR
25 since middle 70s started to kind of information and

1 kind of little institute which was looking after the
2 technology.

3 Q. Mr. Marek, I suggest to you that the
4 technology development units as they are presently
5 constituted and the manner in which they are run is new
6 development or development since you were a forester
7 working for the Ministry of Natural Resources?

8 A. How do you call it, what is the name
9 of it?

10 Q. Technology development units. There
11 is one in Timmins and one in Thunder Bay.

12 A. Oh, you talking about TDUs.

13 Q. TDUs.

14 A. Oh.

15 Q. I'm sorry.

16 A. Yes.

17 Q. That's something which came into
18 being after you left?

19 A. That is correct. It's joined to the
20 university at Lakehead, that's right. TDU is new, but
21 it has nothing to do with -- I don't know if it has
22 anything to do with the technology of equipment.

23 Q. Well, I take it from your answer that
24 you are not really familiar with the sorts of things
25 that the TDUs actually deal with?

1 A. Now, no. I get pamphlets every once
2 in awhile. I read some of these publication, matter of
3 fact I got one few days ago.

4 Q. And it might very well be that the
5 TDUs in fact deal with some of the issues and concerns
6 that you've raised here, but you wouldn't know?
7 You just don't know? I'm not criticizing you, but you
8 just aren't up to date with what the TDUs do?

9 A. I don't know everything what's going
10 in Canada in research.

11 Q. Okay. All right. You had a lengthy
12 discussion with Mr. Hanna regarding a number of his
13 terms and conditions where he talked about the kind of
14 research that he wanted to do. Do you remember that?

15 A. Could I go back just to the previous
16 thing?

17 Q. Sure.

18 A. Last summer, several members of TDU
19 came to me to show them some of these experiments which
20 I have conducted and they were not aware of it, of
21 course, so I spent I think two or three days with them.
22 So that is the kind of contact I have recently.

23 Q. Okay. Let's go on to what Mr. Hanna
24 was talking to you about. He went through a number of
25 his terms and conditions saying that the Ontario

1 Federation of Anglers & Hunters have recommended this
2 research, what do you think, and I think in most cases
3 you had thought that his ideas were okay, they were
4 acceptable?

5 A. Yes, I think they have merits.

6 Q. All right. And I am not quarrelling
7 with you -- I don't want to discuss that with you.

8 When you were agreeing with the terms and
9 conditions, Mr. Marek, were you considering whether
10 there was sufficient dollars to do those, or were you
11 looking at priorities in any way or were you just
12 saying conceptually that they were acceptable
13 suggestions? I assume it was the latter.

14 A. Research costs money, research
15 requires cooperation of many field of sciences. When
16 we talk, for instance, about ecosystem or nutrient
17 cycling or some of these very basic forest ecological
18 research, that's going to cost money, it's no doubt
19 about it.

20 And I don't think actually money is
21 really big problem, I think the problem to is to gather
22 group of scientists fully aware of the problem to
23 understand the problem and research it on a kind of
24 longer term; in other words, what I am saying, to
25 gather group of scientists who have representation by

1 experienced ecologists, and botanists and applied
2 ecology, soils men. It's pretty difficult, it requires
3 quite a...

4 Q. Well, all right. Just accepting what
5 you say, that it doesn't take a lot of money, I don't
6 necessarily agree with that, but let's take that aside.

7 You agree that you would still have to
8 have priorities set in terms of what research you were
9 doing because you couldn't possibly research
10 everything, which may seem like a good idea, you have
11 to set some sort of priorities?

12 A. Oh, obviously.

13 Q. Okay. And when you were agreeing
14 with Mr. Hanna and saying, yes, I think that is an
15 acceptable idea; yes, that is something which I think
16 would merit looking at, I'm assuming, sir, that you
17 were just agreeing with him conceptually and did not
18 turn your mind to the question as to whether it was
19 practical to do all of the things that Mr. Hanna was
20 suggesting to you?

21 A. Mr. Freidin, this bothered me for
22 many, many years and I had to turn quite frequently to
23 sources which perhaps just in reverse of what you said
24 didn't get foundation, they just do it because they are
25 interested in it; in other words, dedication to

1 research, dedication to knowing, dedication to advanced
2 forestry, to good research.

3 Q. Mr. Marek, you know, I'm just going
4 to interrupt you because I would like it if you could
5 just answer the question.

6 When you told Mr. Hanna you thought those
7 were acceptable ideas, I'm assuming that you were
8 not -- you were looking at it conceptually and did not
9 turn your mind to whether it was practical to, in fact,
10 implement research into all of the matters that Mr.
11 Hanna was suggesting to you?

12 A. I feel it's a priority.

13 Q. It's a priority to do all of the
14 things. Did you turn your mind as to whether it was
15 practical in terms of the number of scientists around
16 that all of the things suggested to you by Mr. Hanna
17 could in fact be done in a reasonable time frame?

18 A. Mr. Freidin, would you tell me more
19 urgent priority to know how trees grow, or how we do
20 understand dynamic -- Mr. Hanna -- what he suggested
21 that, and I didn't say that, it was him who suggested,
22 we need to better understand our priorities in
23 research, that's what he said actually. He said that
24 we are talking about intensification of forest
25 management and we don't know some of the basic answers

1 how to do it, and we don't understand it.

2 Q. I am not questioning--

3 A. That's what Mr. Hanna said.

4 Q. I'm not questioning your evidence as
5 to whether there is a need or a desire to look at those
6 things, I'm asking you when you agreed with him, did
7 you turn your mind as to whether it is practical,
8 whether it is possible to do all of those things that
9 we think should be looked at at the same time?

10 A. Well, obviously, you cannot look at
11 the total spectrum of science and say we do it all
12 together and at one time.

13 I agree with you, there are some
14 priorities, but what I have understood from Mr. Hanna's
15 statement was very simple this: That Mr. Hanna was
16 concerned about some of the basic knowledge we are
17 applying being involved at the same time with very
18 intensive and very extensive timber management.

19 Q. Do you know what the Ontario Forest
20 Research Council is?

21 A. Yes, I know what Ontario Research
22 Council is, yes. I know they were cut, the budget was
23 cut, I realize that.

24 Q. And do they get involved in
25 finalizing research which is done or suggested in

1 relation to forest management issues, timber management
2 issues?

3 A. The whole -- some research is being
4 finalized by this institution, I am aware of it, I
5 personally feel that perhaps they should contribute
6 -- more money to this kind of basic research but, as you
7 stated, I suppose they got their own priorities.

8 That's the same with CFS, sir, I work
9 with CFS for many, many years and I am still working
10 with them, perhaps not officially, but let me tell you
11 that the problem with CFS financing is that indeed they
12 have different priorities and perhaps they don't feel
13 that ecosystem studies and study how to grow properly
14 trees or how to understand the dynamics of second
15 growth system, or whatever it may be, is not important
16 at this moment. That could be.

17 Q. Do you know what sort of groups are
18 represented on the Ontario Forest Research Council?

19 A. Oh, God, there must be lots. I
20 couldn't tell you.

21 Q. Can you name any? Just name some
22 that you're aware of?

23 A. I don't know what to do, what has to
24 do with my presentation here. I honestly don't. Why
25 should I answer that, I'm not an expert on Ontario

1 Research Council.

2 Q. All right. So you're not aware then
3 of what bodies are represented on the Ontario Forest
4 Research Counsel, I take it?

5 A. Not offhand, no.

6 MR. FREIDIN: This might be a good time
7 to stop for the day, Madam Chair.

8 MADAM CHAIR: Thank you, Mr. Freidin.

9 Mr. Marek, we will see you tomorrow
10 morning at nine o'clock. And have you discussed
11 with -- or have you done something about your travel
12 arrangements?

13 THE WITNESS: Yes, I have postponed my
14 return to up north for one day, 24 hours.

15 MADAM CHAIR: Thank you, Mr. Marek.

16 And, Mr. Freidin, you will be how long in
17 the morning?

18 MR. FREIDIN: Oh, I think no more than
19 two hours, probably less.

20 MAD AM CHAIR: And, Ms. Swenarchuk, how
21 long do you plan to take?

22 MS. SWENARCHUK: I would think between
23 one and two hours, probably closer to one.

24 MR. FREIDIN: Just one matter, Madam
25 Chair. I gave Mr. Marek the little slip with my

1 calculations of that two thousand eight hundred and
2 some hectare plots per square mile and I asked him to
3 check out the mathematics.

4 Have you still got that, Mr. Marek?

5 THE WITNESS: I forgot all about it, sir.
6 You know, I have to forget about all kinds of things.

7 MR. FREIDIN: I know. All right, we'll
8 talk about it after the break, we don't have to deal
9 with it now.

10 MR. CASSIDY: Madam Chair, based on those
11 time suggestions, it appears that Panel 4 would be
12 beginning in the afternoon. Am I, therefore, on safe
13 ground to advise my colleague Mr. Cosman, who is going
14 to handle that panel, to be here at two o'clock.

15 MS. SWENARCHUK: 1:30.

16 MADAM CHAIR: 1:30 That's the plan
17 right now, Mr. Cassidy, yes.

18 MR. CASSIDY: Thank you.

19 ---Whereupon the hearing adjourned at 4:05 p.m., to be
20 reconvened on Tuesday, November 27th, 1990,
commencing at 9:00 a.m.

